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ABSTRACT

This report is designed to provide numerical data about student performance on the curriculum of the Boston (Massachusetts) Public Schools (BPS) as measured by curriculum referenced tests (CRTs). BPS Department of Educational Testing analyzed data from the 1986 CRT final exams in: reading and language arts (grades K-8), high school English (six levels), mathematics (grades 1-8), high school mathematics (nine levels), science (grades K-8), high school science (six levels), social studies (grades 3-8), U.S. History and Civics, Spanish I and II, and French I. BPS curriculum guides direct instruction in most subjects. Since each curriculum guide is matched with a curriculum referenced test, assessment of the extent to which students meet specific objectives set forth in the guides is possible. This analysis is used to identify strengths and deficits in curriculum implementation or instruction as measured by student CRT performance. Results may be used for specific intervention at the school level or for discerning school district patterns. The report contains descriptions of each instrument, the specific curriculum objectives addressed by the CRT, the student population, system strengths and weaknesses, and extensive tables presenting school-by-school analyses of percent of correct responses to each test item. (MDE)

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QUANTITATIVE ANALYSIS OF CURRICULUM EFFECTIVENESS: 1986

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QUANTITATIVE ANALYSIS OF CURRICULUM EFFECTIVENESS: 1986

BOSTON PUBLIC SCHOOLS

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Director
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January 1987



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FOREWORD

This "Quantitative Analysis of Curriculum Effectiveness" is a new publication by the Office of Research and Development (R&D). It is designed to provide extensive numerical data on the performance of Boston Public Schools (BPS) students on our curriculum, and has been developed as part of R&D's educational accountability and planning program.

The data and analyses in this publication focus exclusively on the curriculum referenced tests (CRT's) program conducted by R&D's Department of Educational Testing. This monograph details student performance on the 1986 CRT final exams, grouped by grade level and subject area, in:

- Reading/Language Arts (Levels K-8)
- High School English (6 levels)
- Mathematics (Levels 1-8)
- High School Mathematics (9 levels)
- Science (Levels K-8)
- High School Science (6 levels)
- Social Studies (Levels 3-8)
- High School Social Studies (U.S. History and Civics)
- High School Foreign Languages (Spanish I & II, French I)

The special contribution of this analysis of CRT data that it speaks directly to the effectiveness of BPS curricula. Classroom instruction for most subjects taught at BPS (e.g., Math, Science) is directed by curriculum guides at each grade level, which delineate specific, measurable objectives to be achieved for each strand or domain in the subject area (e.g., computation in arithmetic). Each curriculum guide, in turn, is accompanied by a matching curriculum referenced test (CRT) developed by R&D's Department of Educational Testing in collaboration with staff from the Division of Curriculum & Instruction. In essence, each curriculum objective is measured by a specific test item, and each group of objectives or curriculum strand is measured by a cluster of test items called a domain. This structure allows assessment of the effectiveness of the BPS curriculum by measuring the extent to which students have learned or "meet" the specific groups of objectives set out in the curriculum guides.



iii.

The Division of Curriculum and Instruction, and personnel at district and school levels, can apply this analysis to identify strengths and deficits in curriculum implementation or instruction --as suggested by student CRT performance-- and design finely targeted, information-driven instructional interventions at the school level. This method can also serve to identify patterns of specific strengths and deficits across schools within districts, or patterns of compounding deficits across systemwide curriculum levels. This can assist the Division of Curriculum & Instruction and community district superintendents to plan targeted remedial programs simed at intervening strategically in the BPS curriculum.

The quartitative gata provided in this publication should offer the opportunity for valuable and insightful analyses of our educational curriculum, and serve as a springboard to an intensive dialogue and concerted planning efforts by our professional personnel. It is our hope that this monograph will play a positive and constructive role in promoting organizational learning and creative school-based planning.

Yohel Camayd-Freixas, Ph.D. Director Office of Research & Development

Maryellen Donahue Manager Department of Educational Testing

January 1987



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QUANTITATIVE ANALYSIS OF CURRICULUM EFFECTIVENESS BOSTON PUBLIC SCHOOLS

1986

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ACKNOWLEDGEMENTS

This publication, Quantitative Analysis of Curriculum Effectiveness: 1986, is a new report. It contains a tremendous amount of
information on student performance on each of the final Curriculum Referenced Tests administered in the spring of 1986. For the
first time, the system is provided with information on each of
the items at the system, district, and school levels. This discrete information will provide the base on which to build improved
and more focused instructional initiatives.

Given the magnitude of the endeavor, a number of departments were involved in the publication. From the Office of Information Systems: Albert Lau provided the leadership in the data processing effort, and Arlene Thompson and Christopher Murray handled most of the programming and data processing. From the Office of Curriculum and Instruction: the program directors gave guidance in examining the curriculum objectives. From the Department of Educational Testing a very special thanks is due to Edwina Anderson who contributed the layout and design for this publication and coordinated the printing process.

This document is the result of collaborative efforts of a number of departments and to them the Office of Research and Development dedicates this publication.

Yohel Camayd-Freixas, Ph.D. Office of Research and Development

Maryellen Donahue Department of Educational Testing

January 1987

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HOW TO READ THIS REPORT

This document is organized by subject area and, within each subject area, analyses of curriculum referenced test (CRT) data is conducted by grade level. The sections for each grade level are described below:

CRT Summary

For each CRT test there is a narrative summary page that describes the CRT instrument and the specific curriculum strands addressed by the CRT, the population to whom the test was administered, and outlines analyses of performance strengths and weaknesses in the curriculum made evident by these data. In this latter section, an overview of student achievement is provided from a system-wide perspective. District and school personnel are encouraged to apply similar analyses to their individual district or school.

CRT and Curriculum Objectives Correlation Sheet

This sheet lists the objectives tapped by each item within each domain for tests at grade levels 3 and above. The Kindergarten, Grade 1, and Grade 2 levels do not have this item-by-item breakdown because teachers report item scores aggregated by each domain or curriculum strand, and single item/objective data is thus not available. The young age of students taking this test necessitates their writing directly in the test booklets, rather than on separate answer sheets. Teachers must then hand-score the booklets and record the students' scores for each subtest on data collection sheets.

Data Pages (Levels K-2)

For levels K-2 the school code and name are listed on the left-hand side of the upright page, and all the curriculum strand/domain titles are listed on the top of each column. To facilitate explanation of how this table may be analyzed, a portion of the Mathematics-Level 1 test is reproduced in page viii and analyzed below.

In this example it can be seen that at the Ohrenberger School, the average number of items that Grade 1 students answered correctly in the Numbers/Numeration domain was 8 out of a possible 10 items; in Fractions/Money the average



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was 7 out of 10 items; in Measurement/Geometry the average was 8 out of 10 items; and in Computation the average was 16 out of 20 items. When comparing the average scores of the Ohrenberger school to those of District E (the second line from the bottom), we can see that Grade 1 students at that school performed, on average, as well as other students in the District in both the Fractions/Money domain and in and better than average in domains Measurement/Geometry; such as Numbers/Numeration and Computation. Comparing the Ohrenberger's average scores in these domains to those of the system (the bottom line), one can see that the students in Grade 1 at that school performed, on average, as well as other students in the system in both Fractions/Money and Measurement/Geometry, and better than other students in the system in both Numbers/Numeration and Computation.

			HATHERA	1168	
SCHROL CROF	SC HOTEL NAME	NUMB./NUMER. (DUT OF 10)	FRAC./ HOMEY (OUT OF 10)	MEAS./ CEOM. (OUT OF 10)	COMPUT. COUT OF 201
4230	HERNIGAY ELEMENTARY	07	06	••	14
4271	CHRLEY FLEMENTARY	87	00	96	16
4 160	MCKAY FLEMFNTARY	08	07	97	14
4410	CHREMMERGER ELEMENTARY	00	07	••	14
4500	TRUTTEP ELEMENTARY	07	07	40	15
••10	HIRACF MANN SCHOOL	03	06	00	09
050	JACKSOM MANN ELEMENTARY	07	07	••	14
01 SE		07	07	04	15
DESA		07	07	00	15
DISA		07	01	06	15
013C		07	07	••	15
0150		00	08	99	17
156		07	07	98	13
Stot	SYSTEM WIDE TOTALS	07	07	9 3	15

Data Page (Levels 3 through High School)

For grade levels 3 and higher, data are available for each curriculum objective and CRT item. These data are outlined in the "Data Page". The school codes are listed on the left side of the upright page, and individual CRT item numbers are across the top of the page; the last column indicates the CRT total on all items for the school. This data sheet should be used in conjunction with the preceding page that lists the correlation of the CRT items with the curriculum objectives. These comparisons should help determine which particular items or curriculum domain students in the school are mastering or not mastering, as well as to identify any pattern of curriculum performance that may be typical for the given school or district. To support this explanation, portions of the printout and the objectives correlation sheets have been reproduced below, along with an example:

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Printout Sample

SCHL	42	43	44	45	TUTA
21 37	71	68	72	55	69
7170					76
45 70	40				71
20 60			57		-
20 10	88	_	77		-
2240	/3		62	-	-
DISA	80	69	71	57	71
2110	84	72	77	72	74
2170	69			54	
2140	75	75	76	52	73
2700				56	
2950	74	66	62	59	73
ยรเด	76	68	70	57	72
0127	80	ρĄ	71	57	71
DISN			70	-	-
	79				-
DISD				54	-
DISE					-
1012	77	67	71	53	

Objectives Correlation Sample

3.4	Identifying the sequence		
C. C. 7	Writer's purpose inferring unstated points Interpreting figurative language	678	74
D.3 B.3	Pact/opinion Details	0.0	#I Ger
C.1 C.9 D.2	Pictics/non-fictire Commotation of words & tone of passage Predicting further outcome	W 4	a
0.7	Identifying irrelevant information	V 4	

In this example, by reading down the column labeled 42, it can be seen that for CRT item # 42 (fiction/non-fiction) there is a range in the percent of students answering the item correctly: At the Taft (school #2170) and the Tobin (#4570) 90% of the students answered this item correctly, whereas, at the Lewis (#2060) only 60% of their students answered it correctly. Review of the Objectives Correlation Sample shows that item #42 measures objective "C.1", which taps the discrimination between fiction and non-fiction. Educationally, this suggests that students at the Lewis School may need additional review in discriminating between fiction and non-fiction, while those at the Taft and at the Tobin know those skills well. Similarly, the last column labeled "TOTAL" shows the average percent of CRT items answered correctly. Looking at the five middle schools listed for Area B, it can be seen that the Shaw (#2110) and the Thompson (#2200) had the highest average scores (74%), and both of these schools scored a bit above the District B average (i.e., 72%) as well as the system average (71%), although not by much; these schools are performing similarly and well in this particular CRT for this grade level.



ix.

ELEMENTARY SCHOOLS BY DISTRICT AS LISTED ON PRINTOUTS

DIST	RICT A	DISTR	uct c	DISTR	ርም ድ
4160	GARDNER	4051	DI CKERMAN	4053	HERNANDEZ
4170	GARFIELD	4130	S. GREENWOOD	4061	GUILD
4173	WINSHIP	4131	ENDICOTT	4113	HALE
4220	HAMILTON	4140	EVERETT	4210	HALEY
4221	BALDWIN	4150	FIFIELD	4230	HENNIGAN
4570	TOBIN	4250	GOLLAND	4271	J. CURLEY
4571	FAPRAGUT	4340	MARSHALL	4360	MCKAY
4010	AGASSIZ	4350	MATHER	÷410	OHRENBERGER
4240	ELLIS	4390	KENNY	4580	TROTTER
4241	HIGGINSON	4391	O'HEARN	4610	HORACE MANN
4270	J. KENNEDY	4400	MURPHY	4620	JACKSOH-MANN
4310	LONGFELLOW	4550	STONE		
4311	MANNING	4022	PERKINS		
4370	MENDELL	4052	WINTHROP		
4371	FULLER	4100	DEVER		
4430	PARKMAN	4120	EMERSON		
DISTR	TOT D	4121	MASON		
4030	BEETROVEN	4530	RUSSELL		
4031	KILMER	4531	CLAP		
4081	BATES	4590	TYNAN		
4082	MOZART	4592	PERRY		
4290	LEE	4630	CONDON		
4560	SUMNER	DISTR	ICT D		
4561	PHILBRICK	4260	HURLEY		
4690	MATTAHUNT	4280	KENT		
4070	CHITTICK	4283	WARREN-PRESCOTT		
4080	CONLEY	4381	ELIOT		
4151	TAYLOR	4640	BLACKSTONE		
4190	E. GREENWOOD	4650	QUINCY		
4192	F. ROOSEVELT	4062	ERADLEY		
4200	GREW	4321	ALIGHIERI		
4201	CHANNING	4322	OTIS		
4670	P.A. SHAW	4361	ADAMS		
		4541	P. KENNEDY		
		4543	O'DONNELL		

xi.



MIDDLE SCHOOLS BY DISTRICT AS LISTED ON PRINTOUTS

DISTRICT A

2130 EDISON

2170 TAFT

4570 TOBIN

2060 LEWIS

2070 M. CURLEY

2240 T. ROOSEVELT

DISTRICT B

2110 R. SHAW

2120 LEWENBERG

2140 IRVING

2200 THOMPSON

2950 ROGERS

DISTRICT C

2030 CLEVELAND

2080 HOLMES

2180 WILSON

2090 GAVIN

2190 MCCORMACK

2260 DEARBORN

DISTRICT D

2010 EDWARDS

2040 TIMILITY

2050 BARNES

DISCTRICT E

2100 KING

2270 MACKEY

2980 WHEATLEY

4360 MCKAY (Gr. 6)

HIGH SCHOOLS BY DISTRICT AS LISTED ON PRINTOUTS

DISTRICT A

1040 BRIGHTON

1110 JAMAICA PLAIN

DISTRICT B

1250 WEST ROXPURY

1100 HYDE PARK

DISTRICT C

1060 DORCHESTER

1120 BURKE

1160 SOUTH BOSTON

DISTRICT D

1050 CHARLESTOWN

1070 EAST BOSTON

DISTRICT E

1080 BOSTON ENGLISH

1190 BOSTON HIGH

1210 MADISON PARK

1240 UMANA TECH.



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READING/LANGUAGE ARTS
ELEMENTARY AND MIDDLE



READING/LANGUAGE ARTS - LEVEL K

INSTRUMENT AND POPULATION DESCRIPTION

The test consists of three parts measuring selected objectives in the curriculum strands of Literal, Interpretive, and Evaluative Comprehension. The Activities Checklist (Part I), worth 30 points, is primarily designed to address speaking and listening objectives. The Small Group Test (Part II), worth 40 points, is a paper and pencil test designed to assess a child's proficiency in writing, phonics, and study skills. The Individual Test (Part III), worth 30 points, is designed to assess student proficiency in alphabet skills and understanding at different levels of comprehension.

The population includes all students enrolled in Kindergarten II who were administered an on-level test and for whom valid scores were reported.

SYSTEM STRENGTHS AND WEAKNESSES

Because of the young age of students taking this test, they responded in some cases orally and in other cases by writing directly in the test booklet, rather than on separate answer sheets. Teachers hand-scored the booklets and tabulated the oral responses and recorded the students' scores for each of the three sections on data collection sheets, thus, individual item data for analysis are not available. Overall, students performed well on the test, with a system-wide average score of 83%. On the Activities Checklist, the average score was 26 points out of a possible 30. On the Small Group Test, the average score was 34 points out of a possible 40. On the Individual Test the average score was 23 points out of a possible 30 points.



BOSION FUBLIC SCHOOLS CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REFORT

CODE		ILUM REFERENCE TEST ADING/LANGUAGE ART ACTIVITIES CHECKLIST (OUT OF 30)		AGE SCURE REFURT LEVEL KII INDIVIDUAL TEST (OUT OF 30)	/,
4160	GARDNER ELEMENTARY	26	35	23	/
4170	GARFIELD ELEMENTARY	24	33	21	/
4173	WINSHIP ELEMENTARY	26	33	23	/
4220	HAMILTON ELEMENTARY	25	35	22	/
4221	BALDWIN ELEMENTARY	21	30	19	/
4570	TOBIN ELEMENTARY	27	33	21	/
45 . 1	FARRAGUT ELEMENTARY	26	37	23	/
4010	AGASSIZ ELEMENTARY	27	36	25	/
4240	ELLIS ELEMENTARY	26	33	17	/
4241	HIGGINSON ELEMENTARY	21	34	22	/
4270	J KENNEDY ELEMENTARY	27	3 6	25	/
4310	LONGFELLOW ELEMENTARY	28	39	28	/
4311	HANNING ELEMENTARY	27	38	21	/
4370	HENDELL ELEMENTARY	23	32	22	/
4371	FULLER ELEMENTARY	27	32	17	/
4430	PARKHAN ELEHENTARY	27	36	23	1
DISA		26	34	22	/
4030	BEETHOVEN ELEMENTARY	28	32	18	/
4031	KILMER ELFMENTARY	28	37	26	/
4081	BATES ELEMENTARY	25	33	20	/
4082	HOZART ELEMENTARY	16	32	20	/
4290	LEE ELEMENTARY	24	33	19	/
4560	SUMNER ELEMENTARY	26	32	20	/
4561	PHILBRICK ELEMENTARY	29	37	21	/



SCHOOL

CODE

4052

SCHOOL

NAME

WINTHROP ELEMENTARY

4690	MATTAHUNT ELEMENTARY	28	36	26	/
4079	CHITTICK ELEMENTARY	26	32	23	/
4080	CONLEY ELEMENTARY	30	37	30	/
4151	TAYLOR ELEMENTARY	27	35	26	/
4190	E GREENWOOD ELEMENTARY	25	33	26	/
4192	F ROOSEVELT ELEMENTARY	27	36	27	/
4200	GREW ELEMENTARY	26	35	22	,
4201	CHANNING ELEMENTARY	28	36	27	,
467 0	P A SHAW ELEMENTARY	21	32	20	/
ASIG		26	34	23	/
4051	DICKERMAN ELEMENTARY	27	35	21	,
4130	S GREENWOOD ELEMENTARY	27	35	25	/
4131	ENDICOTT ELEMENTARY	28	39	27	,
4140	EVERETT ELEMENTARY	24	25	24	/
4150	FIFIELD ELEMENTARY	24	35	22	/
4250	HOLD AND ELEMENTARY	29	35	24	/
4340	HARSHALL ELEMENTARY	25	35	23	/
4350	MATHER ELEMENTARY	25	33	22	/
4390	KENNY ELEMENTARY	29	37	26	,
4391	CHEARN ELEMENTARY	29	36	26	,
4400	MURPHY ELEMENTARY	2 9	37	24	/
4550	STONE ELEMENTARY	24	34	22	,
4022	PERKINS ELEMENTARY	26	35	24	/

23

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READING/LANGUAGE ARTS

ACTIVITIES

CHECKLIST

(OUT OF 30)

BOSTON PUBLIC SCHOOLS

CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT

SHALL GROUP

TEST

(OUT OF 40)

~ LEVEL KII

INDIVIDUAL

11

11

TEST

(OUT OF 30)





BOSTON FURLIC SCHOOLS

CURRICULUM REFERENCE	TEST	JUNE	1986	AVERAGE	SCORE	REPURT
EFVDING 1 VNCHVCE						

CODE 2CHOOL		ADJNG/LANGUAGE AR ACTIVITIES CHECKLIST (OUT OF 30)		LFVEL KII INDIVIDUAL TEST (OUT OF 30)	//
4100	DEVER ELEMENTARY	25	31	23	/
4120	EMERSON ELEMENTARY	22	25	22	/
4121	HASON ELEHENTARY	24	35	21	/
4530	RUSSELL ELEMENTARY	27	36	27	/
4531	CLAP ELEMENTARY	29	36		/
4590	TYNAN ELEMENTARY	27	38	28	/
4592	PERRY ELEMENTARY	24	35	26	/
4630	CONDON ELEHENTARY		34	24	/
DIZC		26	34	24	/
4280	KENT ELEMENTARY	28	33	19	/
4283	WPRESCOTT ELEMENTARY	25	34	24	/
4381	ELIOT ELEMENTARY	26	35	23	,
4640	BLACKSTONE ELEMENTARY	25	32	20	,
4650	QUINCY ELEMENTARY	23	34	23	/
4062	BRADLEY ELEMENTARY	27	34	20	,
4321	ALIGHIER) ELEMENTARY	28	37	27	/
4322	OTIS ELEMENTARY	28	36	25	,
4361	ADAMS ELEMENTARY	28	36	22	/
4541	P KENNEDY ELEMENTARY	26	34	20	/
4543	ODONNELL ELEMENTARY	26	33	22	/
DIZD		26	34	22	/
4061	GUILD ELEMENTARY	27	37	24	/
4113	HALE ELEMENTARY	26	35	17	/
4210	HALEY ELEMENTARY	28	35	22	/



BOSTON PUBLIC SCHOOLS CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT

	RE	REHDING/LANGUAGE ARTS - LEVEL KII					
CODE	SCHOOL SCHOOL	ACTÍVITÍES CHECKLIST (OUI OF 30)	SMALL GROUP TEST (OUT OF 40)	INDIVIPUAL TEST (OUT OF 30)	//		
4236	HENNIGAN ELEHENTARY	23	33	22	/		
4271	CURLEY ELEMERYGRY	29	35	24	/		
4360	HCKAY ELEMENTARY	27	35	24	/		
4410	OHRENBERGER ELEMENTARY	27	36	26	/		
4580	TROTTER ELEMENTARY	29	37	27	/		
4610	HORACE MANN SCHOOL	23	29	18	,		
4620	JACKSON MANN ELEMENTARE	27	35	25	,		
DIZE		27	35	24	,		
DISA		26 .	34	22	,		
85.1d		26	34	23	/		
DICC		26	34 "	24	,		
DISD		26	34	22	,		
DIZE		27	35	24	,		
1012	SYSTEM WIDE FOTALS	26	34	23	,		



READING/LANGUAGE ARTS - LEVEL 1

INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of thirty-five multiple choice items measuring selected objectives in the curriculum strands of Study Skills/Language Structure (10 items), Literal Comprehension (8 items), Interpretive Comprehension (1 item), Evaluative Comprehension (4 items), and Vocabulary (12 items). In addition there are Dictation and Writing portions that address the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage.

The population includes all students enrolled in Grade 1 who were administered an on-level test and for whom valid scores were

submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Because of the young age of the students taking these tests they responded by writing directly in the test booklet, rather than on separate answer sheets. Teachers hand-scored the booklets and recorded the scores for the subtests on data collection sheets, thus individual item data for analysis are not available. Overall, students performed moderately well on this test with a system-wide average score of 75%. On the Writing portion the average score was 21 out of a possible 30 points. On the Dictation section the average score was 7 out of a possible 10 points. In Study Skills/Language Structure the average score was 9 out of a possible 10 points. In the Listening section the average score was 14 out of a possible 20 points and in Reading the average was 24 out of a possible 30 points. Students appear to be mastering the objectives in Study Skills/Language Structure, but performance is weaker in the areas of Listening and Reading.



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BUSTON PUBLIC SCHUULS SURPICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT READING/LANGUAGE ARTS LEVEL 1

		WE AD LIGHT LAN	POWCE WELL FEA	tl 1		
S C HOUL CODE	SC HOOL NA ME	WRITING LOUT OF 30 POINTS)	DICTATION TOUT OF TO PUINTS)	STUDY SK. L. STRJC. (CUT OF 10 ITEMS)	LISTEN. LOUT OF 10 LIEMS)	REAUING (OUT OF 15 ITEMS)
4690	MATTAHUNT ELEMENTARY	20	07	08	05	10
4070	CHITTICK ELEMENTARY	25	07	09	06	12
40 80	CONLEY ELEMENTARY	20	09	11	06	11
4151	TAYLOR ELEMENTARY	24	07	09	06	11
4192	F RODSEVELT ELEMENTARY	18	06	0.8	07	09
4200	GREW ELEMENTARY	21	08	09	11	16
4201	CHANNING ELEMENTARY	19	06	08	07	11
46 70	P A SHAW ELEMENTARY	24	14	11	06	11
D158		21	07	09	07	12
4051	DICKERMAN ELEMENTARY	16	10	0.8	05	11
41 30	S GREENWOOD ELEMENTARY	20	06	08	05	11
4131	ENDICOTT ELEMENTARY	18	06	0.8	05	11
4140	EVERETT ELEMENTARY	20	05	0.8	06	10
41 50	FIFIELD ELEMENTARY	19	10	10	06	li
42 50	HOLLANO ELEMENTARY	21	05	0.8	05	09
4350	MATHER ELEMENTARY	13	05	08	05	09
43 90	KENNY ELEMENTARY	23	07	09	06	11
4391	UHEARN ELEMENTARY	21	06	08	06	10
4400	MURPHY ELEMENTARY	16	05	0.8	05	10
4550	STONE ELEMENTARY	2 1	06	08	07	12
4022	PERKINS ELEMENTARY	17	06	08	13	16
40 52	WINTHROP ELEMENTARY	27	09	09	08	13
4100	DEVER ELEMENTARY	23	97	08	06	
4120	EHERSON ELEMENTARY	21	05	08	05	1 <i>2</i> 09
				- +	• /	09

BOSTON PUBLIC SCHOOLS CURPICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT READING/LANGUAGE ARTS LEVEL 1

		WE WOLLHOVE WIL	COMPE WKIZ FFA	EL (
SC HOOL CODE	SC HOOL	WRITING LOUT OF 30 POINTS)	DICTATION LOUT OF 10 POINTS)	STUDY SK. L. STRUC. (OUT OF 10 ITEMS)	LISTEN. (DUT OF 10 ITEMS)	READING (OUT OF 15 1 TEMS)
4160	GARDNER ELEMENTARY	20	08	09	08	12
4170	GARFIELD ELEMENTARY	22	07	09	06	10
4173	WINSHIP ELEMENTARY	22	08	08	07	11
4220	HAMILTON ELEMENTARY	18	05	07	04	10
4221	BALDWIN ELEMENTARY	23	06	09	06	11
4570	TOBIN ELEMENTAR)	18	06	09	07	12
4571	FARRAGUT ELEMENTARY	26	07	08	07	12
4010	AGASSIZ ELEMENTARY	19	08	10	05	10
4240	ELL IS ELEMENTARY	10	05	08	06	11
4241	HIGGINS. 1 ELEMENTARY	21	06	09	07	12
4270	J KENNEDY ELEMENTARY	23	07	06	0 6	11
4310	LUNGFELLOW ELEMENTARY	25	06	0.6	05	10
4311	YANNING ELEMENTARY	24	07	09	08	12
4370	MENDELL ELEMENTARY	25	09	09	06	12
4371	FULLER ELEMENTARY	21	13	l 1	06	11
4430	PARKMAN ELEMENTARY	21	07	09	08	13
DI SA		21	07	09	06	11
4030	BEFTHOVEN ELFHENTARY	26	06	09	07	11
4031	KILMER ELEMENTARY	24	06	08	06	11
4081	BATES ELEMENTARY	24	07	09	07	11
4082	MOZART FLEMENTARY	17	07	09	09	15
4297	LEE ELEMENTARY	25	05	09	06	
4560	SUMMER ELEMENTARY	19	06	09	06	11
4561	PHILBRICK ELEMENTARY	20	06	08	06	11



BUSTON PUBLIC SCHOOLS CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT READING/LANGUAGE ARTS LEVEL 1

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		KE AU ING/L AN	GUAGE ARTS LEV				
SC HOOL CODE	SC HOOL Na me	WRETENG (OUT OF 30 POINTS)	DICTATION (OUT OF 10 POINTS)	STUDY SK. L. STRUC. (OUT OF LO ITEMS)	LISTEN. (DUT OF 10 ITEMS)	READING (OUT OF 15 (TEMS)	
4121	MASON ELEMENTARY	22	05	69	08	13	
4530	RUSSELL ELEMENTARY	23	OT	09	07	12	
4531	CLAP ELEMENTARY	17	05	09	05	12	
45 90	TYVAN ELEMENTARY	25	07	09	C7	12	
4592	PERRY ELEMENTARY	23	05	08	95	10	
4630	CONDON ELEMENTARY	19	06	08	06	11	
01 \$C	-	20	06	·- 0 6	06	11	
4280	KENT ELEMENTARY	29	07	09	0	14	
4283	WPRESCOTT ELEMENTARY	22	09	09	06	12	
4381	ELIOT ELEMENTARY	21	07	0 9	06	12	
4640	BLACKSTONE ELEMENTARY.	15	. 06	00	09	15	
4650	OUINCY ELEMENTARY	19	05	08	06	11	
4062	BRAOLEY ELEMENTARY	24	05	09	07	11	
4321	ALIGHIERI ELEMENTARY	22	Q7	09	09	14	
4322	OTIS ELEMENTARY	17	06	09	08	12	
4361	AOAMS ELEMENTARY	21	08	09	06	13	
4541	P KENNEOY ELEMENTARY	26	07	09	07	13	
4543	O DONNELL ELEMENTARY	25	08	09	07	12	
0810		20	07	09	07	13	
40 53	HERNANDEZ ELEMENTARY	26	24	17	18	12	
4061	GUILD ELEMENTARY	24	07	09	08	10	
4113	HALE ELEMENTARY	22	06	09	07	11	
4210	HALEY ELEMENTARY	18	06	09	98	12	
42 30	HENNIGAN ELEMENTARY	23	39	09	07	09	

BOSTON PUBLIC SCHOOLS CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT READING/LANGUAGE ARTS LEVEL 1

S C HOOL CO DE	SC HOOL NA ME	MRITING (OUT OF 30 POINTS)	DICTATION (OUT OF 10 POINTS)	STUDY SK. L. STRUC. (OUT OF 10 ITEMS)	LISTEN. (OUT OF 10 ITEMS)	READING (OUT OF 15 ITEMS)
4271	CURLEY ELEMENTARY	24	07	09	07	12
4360	MCKAY ELEMENTARY	19	06	08	07	10
4410	OHRENBERGER ELEMENTARY	15	96	09	07	11
4580	TROTTER ELEMENTARY	23	06	08	06	11
4610	HORACE MANN SCHOOL	19	10	Q 5	03	0.5
4620	JACKSON MANN ELEMENTARY	21	12	08	05	10
921G		21	09	09	08	11
A2 10		21	07	0%	06	11
DISB		21	07	09	07	12
01 SC		20	06	0.8	06	11
01 50		20	07	09	07	13
DISE		21	09	09	08	21
1012	SYSTEM WIDE TOTALS	21	07	09	07	12

READING/LANGUAGE ARTS - LEVEL 2

INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of forty multiple choice items measuring selected objectives in the curriculum strands of Study/Skills/Language Structure (10 items), Literal Comprehension (12 items), Interpretive Comprehension (5 items), Evaluative Comprehension (8 items), and Vocabulary (5 items). In addition there are Dictation and Writing portions that address the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage. The test serves as both the final examination and the State Basic Skills Test for grade 2 students.

The population includes all students enrolled in Grade 2 who were administered an on-level test and for whom valid scores were reported.

SYSTEM STRENGTHS AND WEAKNESSES

The young age of the students taking these tests necessitated their writing directly in the test booklets, rather than on separate answer sheets. Teachers hand-scored the booklets and recorded the students' total scores on data collection sheets, thus individual item data for analysis are not available. Overall, students performed moderately well on this test with a system-wide average score of 78%. On the Writing portion the average score was 23 out of a possible 30 points. On the Dictation section the average score was 6 out of a possible score of 10. On the Study Skills/Language Arts section the average score was 7 out of a possible 10 points. The average score on the Listening section was 14 out of a possible 20 points and on the Reading portion the average was 28 out of a possible 40 points. Students appear to be functioning well in Writing, Dictation, and Study Skills/ Language Structure, but are experiencing some difficulty with the comprehension objectives that are tapped in the Listening and Reading sections of the test.



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POSTON PUBLIC SCHOOLS CHRRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT READING/LANGUAGE ARTS LEVEL 2

TECR100002

CODE SCHOOL	÷SCHOOL Name	CURRENT GRADE	WRITING (OUT OF 30 POINTS)	OICTATION (OUT OF 10 POINTS)	STUDY SK. L. STRUC. (OUT OF LO I:EMS)	LISTEN. (OUT OF 10 ITEMS)	BASIC 5K. READING (OUT OF 20 ITEMS)
4160	GARDNER ELEMENTARY		26	07	07	08	16
4170	GARFIFLD ELEMENTARY		25	08	0.8	07	15
4173	WINSHIP ELEMENTARY		27	08	08	08	14
4220	HAMILTON ELFMENTARY		21	06	07	0.8	17
4221	BALDWIN FLEMENTARY		23	05	08	06	13
4570	TOBIN FLEMENTARY		22	07	07	0.8	15
4571	FARRAGUT ELEMENTARY		23	06	07	07	13
4010	AGASSIZ ELEMENTARY		24	07	0.8	07	13
4240	ELLIS ELEMENTARY		23	ə s	06	06	13
4241	HIGGINSON ELFMENTARY		24	07 •	07	07	14
4270	J KENNEDY FLEMENTARY		25	07	76	07	13
4310	LONGFFLLOW ELEMENTARY		17	05	06	05	09
4311	MANNING ELEMENTARY		26	07	09	0.8	17
4370	MENDELL ELEMENTARY		25	07	08	07	14
4371	FULLER ELEMENTARY		24	06	07	06	14
4430	PARKMAN ELEMENTARY		26	07	09	0.6	16
D I SA			24	06	07	07	14
4030	GFETHOVEN FLEMENTARY		25	07	07	07	14
4031	KILMER ELEMENTARY		26	07	0.6	0.8	15
4081	RATES ELEMENTARY		26	06	07	07	13
4082	MOZART FLEMENTARY		26	08	08	07	16
4290	LFF FLEMENTARY		25	07	09	0.6	16
4560	SUMMER ELEMENTARY		25	06	07	07	14



BOSTON PUBLIC SCHOOLS CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT READING/LANGUAGE ARTS LEVEL 2

TECR100002

CODE	*SCHOOL NAME	CURRENT Gradf	WRITING (OUT OF 30 POINTS)	DICTATION (OUT OF 10 POINTS)	STUDY SK. L. STRUC. (DUT OF 10 ITEMS)	LISTEN. (OUT OF 10 ITEMS)	BASIC SK. READING (OUT OF 20 ITEMS)
4561	PHILBRICK ELEMENTARY		23	05	07	08	17
4690	MATTAHUNT ELEMENTARY		21	05	07	07	
4070	CHITTICK FLENFNTARY		28	08	09		13
4080	CONLEY ELEMENTARY		17	06	06	0	16
4151	TAYLOR ELEMENTARY		21	07		05	i i
4192	F ROOSEVELT ELEMENTARY		25		07	07	14
42:	GREW ELEMENTARY		23	06	08	07	16
4201	CHANNING ELFMENTARY			07	07	07	14
4670	P A SHAW ELEMENTARY		21	06	0.6	07	14
0158	LECH WINK		51	07	07	06	13
4051	DICHERMAN ALBUM		23	06	07	07	14
	DICKERMAN ELEMENTARY		23	07	08	06	13
4130	S GREENWOOD ELEMENTARY		21	04	06	05	08
4131	ENDICOTT ELEMENTARY		23	07	07	07	
4140	FVERETT ELEMENTARY		20	05	05		14
4150	FIFIELD FLEMENTARY		22	07	08	06	14
4250	HOLLAND ELEMENTARY		21	06		07	14
4340	MARSHALL ELFMENTARY		24	06	07	08	14
4350	MATHER FLEMENTARY		23	06	06	07	11
4390	KENNY FLEMENTARY		22		08	08	13
4391	OHFARN ELEMENTARY			07	07	07	16
4400	MURPHY ELEMENTARY		25	07	07	07	15
4550			25	07	07	08	15
	STONE FLEMENTARY		25	07	07	07	16
4022	PERKINS FLEMCHTARY		26	01	07	07	16



BOSTON PUBLIC SCHOOLS CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT READING/LANGUAGE ARTS LEVEL 2

TECR100002

SCHOOL CODE	°SCHOOL NAME	CURRENT GRADE	WRITING (GUT OF 30 POINTS)	DICTATION (OUT OF 10 POINTS)	STUDY SK. L. STRUC. (OUT OF 10 ITEMS)	LISTEN. (OUT OF 10 ITEMS)	BASIC SK. READING (OUT OF 20 ITEMS)
4052	WINTHROP FLEMENTARY		24	06	0.6	06	16
4100	DEVER ELEMENTARY		22	07	07	07	14
4120	EMERSON ELEMENTARY		22	07	0.8	07	15
4121	MASON ELEMENTARY		25	05	07	08	15
4530	RUSSFLL ELEMENTARY		25	07	07	07	16
4531	CLAP FLEMENTARY		26	08	0.6	09	17
4590	TYNAM ELEMENTARY		26	07	0.6	07	16
4592	PERRY ELEMENTARY		24	07	0.9	08	15
4630	CONDON FLEHENTARY		24	07	08	08	14
nisc			23	06	07	07	14
4280	KENT ELEMENTARY		2.2	05	06	07	16
4283	WPRESCOTT ELEMENTARY		24	09	09	07	15
4381	ELIOT ELEMENTARY		22	07	08	07	15
4640	BLACKSTONE FLEMENTARY		23	06	06	06	13
4650	QUINCY ELEMENTARY		23	96	97	08	14
4062	BRADLEY ELEMENTARY		29	05	07	08	14
4321	ALIGHIERI ELFMENTARY		20	06	06	07	13
4322	OTIS ELEMENTARY		21	06	07	07	15
4261	ADAMS ELEMENTARY		25	08	06	09	16
4541	P KENNEOY ELEMENTARY		26	07	07	08	16
4543	DODNNELL ELEMENTARY		25	06	07	07	15
2510			23	07	06	07	14
4053	HERNANDEZ ELEMENTARY		26	06	06	07	13



BOSTON PUBLIC SCHOOLS CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT READING/LANGUAGE ARTS LEVEL 2

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SCHOOL	*SCHOOL NAME	CURRENT GRADE	WRITING (OUT OF 30 POINTS)	OICTATION (OUT OF 10 POINTS)	STUDY SK. L. STRUC. (OUT OF 10 ITEMS)	LISTEN. (OUT OF 10 ITEMS)	BASIC SK- READING (OUT OF 20 ITEMS)
4061	GUILD ELEMENTARY		26	07	G7	07	14
4113	HALF ELEMENTARY		24	07	07	07	15
4210	HALFY ELEMENTARY		28	07	07	08	16
4230	HENNIGAN ELEMENTARY		26	07	07	06	12
4271	CURLEY ELEMENTARY		20	06	06	08	14
4360	HCKAY ELEMENTARY		24	05	07	06	11
4410	OHRENBERGER ELEMENTARY		25	07	06	07	14
4580	TROTTER ELEMENTARY		23	06	07	07	15
4610	HORACE MANN SCHOOL		23	10	06	06	10
4620	JACKSON MANN ELEMENTARY		24	07	07	06	13
DISE			24	0"	07	07	13
OISA			24	-06	07	07	14
OISR			23	06	07	07	14
DISC			23	06	07	07	14
0150			23	-07	08	07	14
DISE			24	07	07	07	13
STOT	SYSTEM WIDE TOTALS		23	06	07	07	14

SYSTEM SUMMARY ANALYSIS

READING/LANGUAGE ARTS

LEVELS 3-8

DESCRIPTION OF INSTRUMENTS

Each test for Levels 3-7 is comprised of multiple choice items measuring selected objectives in the curriculum strands of Study Skills, Language Structure, Literal Comprehension, Interpretive Comprehension, Evaluative Comprehension, and Vocabulary. In addition there are Dictation (Gr. 3-5) and Writing portions (Gr. 3-7) that address the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage. The Level 8 test is a fifty-five item instrument developed by the State Department and mandated for Grade 8 students. Since it broadly correlates with the curriculum objectives and in the interest of limiting testing, the instrument serves both the State and system requirements.

DESCRIPTION OF CHART

On the following page a chart is provided that identifies problematic reading and vocabulary items and corresponding objectives at each level. The items identified are those which fewer than 60% of the students answered correctly.

GENERAL TRENDS

Generally, performance is good on the Literal Comprehension, Vocabulary, and Study Skills objectives with approximately seventy to eighty percent of the students answering the items correctly. However, performance tends to decrease in the items that measure Interpretive and Evaluative Comprehension and Language Structure. In these domains there is a greater percentage of items answered incorrectly by students.



CURRICULUM REFERENCED TEST ANALYSIS 1985 - 1986 DEPARTMENT OF EDUCATIONAL RESTING READING/LANGUAGE ARTS Grades 3 - 8

TEAKT	ITEM /	# ABSWERING CORRECTLY	OBJECTIVE NUMBER	OBJECTIVE DESCRIPTION
3 .	25 30 49 50	51 % 58 % 49 % 52 %	D.3 C.4 D.3 D.3	fact/opinion inferring cause/effect fact/opinion fact/opinion
Į.	23 25 27 29 42 44	58% 52% 57% 43% 51% 34%	C.5 D.3 D.3 B.3 C.1	main plot/subplot fact/opinion fact/opinion details fiction/non-fiction main plot/subplot
5	21 22 23 33 51 52 53 54 56 58 59 60 61	48% 43% 56% 50% 56% 51% 38% 43% 42% 56% 59%	C.2 C.4 C.1 C.3 D.2 B.2 E.2 E.2 E.3 E.3	key points inferring traits, motives inferring cause/effect fiction/non-fiction inferring cause/effect inferring traits, motives predicting further outcome main idea synonyms antonyms antonyms word meanings word meanings homonyms
6	3 28 35 36 43	41% 51% 50% 57% 51%	C.4 E.2 E.4 C.4	inferring cause/effect antonyme homonyms identifying sequence inferring cause/effect
7	3 28 37 45	56% 58% 56% 53%	C.2 E.2 C.6 D.7	key points antonyme writer's purpose irrelevant information
8 *	5 6 10 11 12 18 19 25 40 45 50	37% 35% 59% 59% 34% 50% 52% 59% 33% 58% 57%	N.A. N.A. N.A. N.A. K.A. N.A. K.A. N.A.	meaning of words in sentence writer's purpose fact/opinion sequence of events drawing comclusions writer's purpose meaning of words in sentence fact/opinion drawing conclusions main idea, supp. details drawing conclusions



^{*} Basic Skilis Test

READING/LANGUAGE ARTS - LEVEL 3

INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of fifty multiple choice items measuring selected objectives in the curriculum strands of Study Skills (10 items), Language Structure (10 items), Literal Comprehension (6 items), Interpretive Comprehension (5 items), Evaluative Comprehension (9 items), Vocabulary (10 items). In addition there are Dictation and Writing portions that address the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage.

The test was organized according to the following domains with each domain containing 10 items: Study Skills, Language Structure, Listening, Vocabulary, and Reading.

The population includes all students enrolled in grade 3 who took an on-level test and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed well on this test with a system-wide average score on the items of 80%. Generally, students appear to be mastering the objectives in Study Skills, Literal Comprehension, and Vocabulary and most of the items in Language Structure and Interpretive Comprehension. However, within these latter two domains there are isolated objectives which are not being mastered by more than forty percent of the students. Within Language Structure, students are having difficulty with syllabication (item #20). Within Interpretive Comprehension, students are having difficulty with inferring cause and effect relationships (item #30).

The most deficits as a strand can be found in the Evaluative Comprehension area. All three items that measure fact/opinion (item #'s 25, 49, and 50) were answered correctly by fewer than sixty percent of the students.



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READING/LANGUAGE ARTS - LEVEL 3

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

1985 - 1986

STUDY SKILLS	Language Structure	Listening	VOCABULARY	READING
1234567890	1 1 1 1 1 1 1 1 1 ′ 2 1 2 3 4 5 6 7 8 9 0	2 2 2 2 2 2 2 2 2 3 1 2 3 4 5 6 7 8 9 0	3 3 3 3 3 3 3 3 3 4 1 2 3 4 5 6 7 8 9 0	4 4 4 4 4 4 4 4 5 1 2 3 4 5 6 7 8 9 0
J.3 J.3 J.4 J.4 J.5	<pre>K.1 K.1 K.1 K.1 K.2 K.2 K.2 Identifying comp. wds., pref., suff. K.3 K.3 Identifying parts of speech K.4 Syllabication K.4 </pre>	B.2 Main idea C.4 Inferring cause and effect relation. D.1 Drawing comparisons W. own experience D.2 Predicting further outcome D.3 Fact/opinion B.2 Main idea B.3 Identifying details D.1 Drawing comparisons W. own experience C.4 Inferring cause and effect relation.	E.2 Synonyms E.2 Antonyms E.2 Word meanings E.3 Word meanings E.5 Hultiple meanings E.5 Homonyms	C.2 Identifying key points C.3 Inferring traits, feelings, & motives C.4 Inferring cause and effect relation. D.1 Drawing comparisons w. own experience D.2 Prodicting further outcome B.2 Main idea B.3 Identifying details D.3 Fact/opinion

PERCENTAGE OF CURRECT ANSWERS PER LIEM NOTE 100 PERCENT UN A PARTICULAR ITEM IS INDICATED BY .. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 10 TAL SCHL 4160 75 48 62 64 ** 91 94 97 94 ** 97 83 81 83 91 ** 37 91 72 67 91 86 81 ** 67 89 86 9/ 94 67 89 ** 91 94 91 89 89 91 89 94 97 94 83 81 89 86 94 81 64 51 34 91 69 95 52 95 91 95 00 00 95 82 82 86 82 91 82 60 56 91 60 95 86 86 95 56 86 86 00 91 78 86 86 91 69 78 78 60 91 91 00 82 91 82 69 91 82 82 65 69 56 82 4170 85 80 70 70 ** ** ** ** ** ** 95 ** 90 85 90 95 95 70 85 65 45 95 85 75 90 65 85 95 95 90 80 85 90 95 90 80 95 95 95 70 95 80 80 75 85 85 70 50 65 84 4173 80 76 84 57 88 84 92 84 84 92 84 76 80 84 80 92 57 76 69 50 80 88 76 92 42 84 84 92 84 50 96 96 92 88 84 92 80 96 84 88 80 92 76 80 80 84 88 80 53 65 81 4220 79 83 83 45 95 95 87 95 87 91 00 95 83 70 83 00 54 66 70 45 95 00 70 00 75 87 66 95 75 70 66 87 87 91 83 91 83 87 83 00 87 95 83 62 91 70 87 62 75 62 81 4221 87 64 74 69 94 82 94 97 92 92 92 82 92 89 87 92 84 74 58 43 92 84 66 ** 51 87 69 97 94 66 61 89 87 92 82 84 79 84 92 94 39 96 82 66 76 74 79 53 23 51 19 4570 71 57 46 75 85 89 85 46 85 85 89 05 71 78 85 82 57 67 71 00 67 71 92 28 75 85 96 89 57 89 85 96 64 85 30 60 82 92 89 85 92 82 75 82 75 92 57 39 35 77 4371 80 80 68 76 93 87 97 04 00 95 97 CO 80 93 95 91 57 78 82 68 97 70 72 95 42 72 87 89 85 51 76 91 97 78 87 93 76 91 89 95 82 93 80 85 87 74 85 74 68 68 83 4010 82 74 69 53 87 76 87 87 82 84 84 76 56 82 56 74 53 58 58 51 84 69 74 82 43 64 64 79 71 35 56 69 76 61 53 66 66 71 66 76 74 82 64 61 71 69 64 38 28 28 67 4240 4241 93 90 84 72 96 93 93 00 93 00 00 87 87 84 96 90 66 78 84 63 00 87 81 00 75 87 81 96 90 60 90 93 96 66 87 93 81 96 90 93 90 00 87 90 00 87 96 75 72 66 85 4270 75 75 64 50 00 00 96 96 96 96 96 85 82 82 85 85 50 71 78 60 96 82 75 96 28 85 89 00 89 67 78 89 89 67 82 00 96 89 89 96 92 00 82 75 85 71 89 46 50 39 81 71 61 76 57 95 80 95 00 85 95 80 80 95 76 90 47 85 85 61 95 20 76 00 52 71 71 95 85 42 71 80 00 85 95 71 90 95 95 00 90 95 95 85 95 80 66 66 82 4311 96 59 74 59 96 92 92 74 92 00 85 62 92 74 96 55 81 74 44 00 74 81 96 59 74 70 96 96 55 88 88 88 70 88 81 85 92 00 96 88 00 92 74 77 70 85 66 59 62 81 96 87 82 70 98 96 98 93 95 93 95 84 90 90 96 62 85 70 65 93 92 79 96 40 71 90 98 95 57 92 87 92 76 78 87 70 90 92 93 93 89 81 71 82 84 85 56 50 50 83 4371 80 83 76 60 93 93 00 90 83 83 96 76 80 90 83 83 90 93 73 66 90 90 83 93 86 90 90 93 96 80 76 90 96 86 86 00 90 93 90 96 86 00 83 86 66 83 73 63 80 d5 44 30 84 74 74 63 95 90 94 95 90 92 94 83 81 88 86 90 61 78 74 60 94 83 77 95 53 80 42 94 89 60 81 88 91 78 83 89 78 89 89 93 87 93 81 75 84 77 86 66 55 56 91 OE SA 73 63 78 52 94 94 00 00 94 89 00 84 78 89 73 00 26 73 78 57 00 94 63 89 21 7.3 57 00 89 42 73 78 00 84 89 89 84 84 89 00 00 00 73 73 89 78 73 08 57 63 77 66 71 76 57 ee ee ee 95 90 95 85 85 76 90 85 95 61 71 80 52 80 80 61 95 76 74 80 95 90 52 66 95 95 76 90 85 85 90 80 95 85 95 80 61 95 85 80 66 66 71 81 4031 87 84 75 63 93 90 96 00 93 96 96 84 69 84 96 93 51 84 72 48 00 72 81 00 30 81 87 00 84 60 84 90 96 84 75 90 84 90 75 00 87 96 90 75 87 81 81 45 24 45 31 4061 80 52 76 61 95 66 95 85 85 95 95 d0 80 76 80 85 61 66 52 33 90 80 66 95 47 71 85 95 95 66 ** 90 90 71 80 85 90 90 90 ** 85 95 76 71 95 66 80 76 33 38 70 4082 88 73 80 60 91 91 84 95 84 91 88 77 68 86 75 82 37 62 68 51 80 40 77 88 53 60 68 91 84 48 82 75 88 71 82 86 68 82 91 91 77 91 86 64 77 66 77 60 31 53 // 4290 75 55 72 62 93 94 94 94 91 98 93 86 77 89 89 96 68 79 79 u7 93 81 86 00 44 84 87 96 91 70 82 84 91 60 91 91 68 91 93 00 91 94 64 72 86 77 70 62 55 41 81 78 73 86 52 86 82 95 95 86 86 86 82 56 95 91 82 56 69 86 47 ** 65 60 95 60 69 82 91 86 43 86 95 86 60 82 91 82 78 9* ** 91 91 82 86 91 82 91 60 21 56 79 4561 77 72 72 61 95 92 95 90 86 87 86 74 80 87 80 88 61 69 62 50 91 76 70 92 44 69 81 93 91 49 69 87 87 83 87 95 79 95 06 97 92 97 92 77 93 77 83 54 51 50 72 4690 80 72 89 67 94 89 89 90 90 85 89 87 85 89 85 87 78 72 74 76 94 83 89 90 40 85 80 90 83 72 83 81 90 80 83 80 49 83 83 90 87 92 85 76 76 76 80 63 50 52 di 4070 00 76 80 76 00 84 00 00 96 00 92 88 80 84 92 00 60 72 88 52 00 88 84 00 76 96 96 00 56 84 00 00 88 88 00 88 00 98 00 96 96 86 60 84 96 92 80 76 66 67 40 80 73 71 83 46 98 98 98 98 98 93 91 81 90 96 90 73 81 91 66 98 83 75 96 70 88 78 98 93 50 81 96 96 86 78 98 81 98 80 98 98 98 96 85 73 96 80 95 73 46 66 85 4151 92 77 82 73 92 87 88 38 88 84 85 79 84 84 85 68 71 73 65 93 85 79 95 61 85 69 90 88 71 77 84 87 80 85 84 74 90 85 90 82 88 85 80 80 87 85 74 57 42 41 41 90 93 96 93 76 90 90 96 96 96 96 93 83 93 90 86 86 63 83 80 60 96 90 73 93 66 86 90 83 86 40 83 93 96 73 86 98 96 93 90 93 80 96 86 73 83 80 93 76 43 46 84 4192 86 82 95 82 00 00 95 91 01 00 95 86 86 86 91 00 43 86 69 52 00 95 78 00 52 95 00 00 78 73 78 00 95 78 00 00 91 00 95 95 00 95 73 91 95 91 65 56 69 UT 4200 77 80 86 52 94 94 91 91 94 97 88 80 80 80 97 55 72 80 55 94 80 63 97 47 88 88 94 86 69 86 91 88 61 73 51 80 91 94 00 88 94 94 86 88 77 86 69 58 63 82 4201 89 78 78 73 00 89 84 94 89 44 78 68 57 78 84 84 52 57 84 78 68 57 89 52 73 68 94 89 52 73 68 84 68 84 84 84 84 89 78 89 68 68 78 68 78 68 73 52 63 52 76 44.70 82 73 81 63 94 91 93 93 90 22 90 83 78 87 85 91 60 73 75 58 93 81 75 94 54 80 81 94 88 58 89 87 91 76 85 90 79 90 87 96 88 94 86 74 86 79 83 65 49 53 HI 00 72 bl 64 03 86 00 00 94 94 97 81 72 94 81 78 67 81 75 64 00 75 59 91 62 83 78 91 91 56 78 86 86 62 89 86 67 72 83 97 64 86 81 67 78 75 78 51 43 27 70 77 69 77 44 94 94 94 97 86 88 83 86 72 86 83 94 63 86 72 66 91 77 72 94 38 75 72 94 88 72 77 06 97 75 86 91 69 90 88 86 91 88 72 80 72 75 61 41 33 79 4130 82 75 75 51 79 93 79 72 82 79 79 65 72 72 86 55 55 62 58 89 65 62 89 34 82 55 86 82 41 82 68 93 75 62 86 62 72 75 89 72 79 72 62 79 62 65 58 27 37 70 4131 85 85 85 51 77 85 92 92 96 96 85 77 85 96 85 51 74 59 51 88 74 74 96 40 81 92 92 92 70 77 85 96 70 77 92 92 81 96 ** 92 88 77 77 88 88 81 66 29 48 o. 4140 81 74 86 67 90 88 90 90 97 95 83 79 88 88 90 53 74 74 51 97 74 76 97 53 90 79 93 83 58 85 95 72 90 97 72 93 88 ** 86 95 79 69 86 79 83 62 51 58 81 4150 74 54 67 58 84 83 87 90 86 87 90 70 65 80 69 79 49 67 62 40 91 67 81 88 40 73 68 88 84 44 66 82 85 72 76 83 68 81 83 92 86 89 77 67 77 66 77 56 44 41 73 4250 77 68 83 46 92 87 93 88 32 77 87 78 78 78 87 67 83 47 69 54 47 88 68 69 88 46 68 75 88 81 48 84 80 87 68 70 84 64 76 75 89 86 88 75 75 71 68 49 47 45 13 43 40 83 77 83 74 87 80 83 83 80 80 80 74 70 81 77 83 50 67 63 50 93 83 68 94 44 75 84 96 87 68 72 81 81 67 70 80 66 81 87 92 76 90 80 71 80 74 84 61 46 49 76 4350 4390 73 60 69 60 91 86 95 95 91 91 78 65 95 86 95 86 78 86 78 91 82 69 ** 56 86 95 ** 35 60 86 86 95 73 86 ** 91 95 86 86 86 96 86 91 78 43 65 de 4391 70 70 68 41 84 86 88 92 84 86 88 64 72 88 80 94 52 68 76 47 98 86 82 88 47 92 86 92 94 62 72 76 92 82 82 78 76 86 84 98 82 96 86 68 90 76 84 90 43 58 78

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931 KO LEVL 3

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11/07/86

931 RD LEVL 3 TECR5005 11/07/86
PERCENTAGE OF CORRECT ANSWERS PER LIFM
MOTE 100 PERCENT ON A PARTICULAR LIEM IS INDICATED BY **

1 2 3 4 5 6 7 8 9 10 11 12 33 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 MITAL SCHL 4052 81 68 81 56 00 81 37 93 93 00 81 93 81 87 00 18 81 87 00 18 81 81 50 87 75 56 00 31 75 75 00 87 43 75 87 00 75 00 00 87 87 93 93 00 93 00 75 87 75 93 93 56 31 80 46 60 70 58 87 17 91 89 87 89 83 75 75 85 79 85 68 81 66 43 95 77 77 95 45 72 81 97 85 54 81 83 79 70 68 81 58 81 81 95 87 95 75 62 85 81 70 58 54 52 76 4100 95 95 90 95 95 90 95 95 90 95 90 76 95 00 25 95 85 80 71 57 95 85 95 95 95 90 00 00 80 66 90 95 95 85 85 95 85 00 90 85 00 90 57 90 71 66 76 80 47 80 4120 88 76 70 52 00 00 94 00 00 94 00 94 82 00 94 94 29 88 70 58 00 88 76 00 35 88 88 00 88 58 00 00 00 76 94 82 94 94 00 88 94 94 70 94 82 82 70 41 41 64 4121 84 71 80 53 88 91 93 95 95 93 86 71 84 84 82 84 40 73 55 31 91 80 68 93 48 82 86 95 88 71 82 77 86 75 75 91 62 88 95 86 80 95 86 71 82 80 77 55 37 42 7 45 30 88 94 83 61 83 94 83 94 94 88 88 77 77 83 88 77 27 66 61 61 83 77 66 94 77 77 77 80 80 77 80 83 90 83 50 88 72 94 27 96 88 94 94 61 77 77 83 55 16 55 .2 4531 \$3 77 83 66 88 83 94 88 83 83 86 88 72 72 77 83 66 77 66 50 94 83 55 88 38 77 88 88 82 55 77 83 00 72 83 88 88 94 88 94 94 83 83 44 83 83 88 66 27 55 /8 4590 90 72 81 72 00 00 00 90 00 00 90 63 54 72 90 90 00 90 63 45 00 00 81 00 36 00 63 90 90 72 81 00 90 81 00 72 81 00 00 00 00 00 81 72 00 90 81 45 54 63 84 4592 98 88 89 46 00 96 98 94 90 93 94 88 75 85 84 96 76 81 76 67 93 84 71 98 52 84 89 98 90 61 92 93 93 89 93 89 76 96 93 86 99 93 88 84 93 78 84 63 47 52 84 4430 84 74 79 57 90 88 91 91 87 88 89 77 73 84 80 86 57 74 67 52 92 77 72 93 48 80 80 93 87 56 80 84 90 74 79 86 71 86 87 96 85 91 82 71 86 75 79 60 43 47 70 **D1 SC** 86 77 88 72 00 94 97 97 94 91 97 77 86 97 88 89 66 86 63 63 91 88 52 00 50 94 88 97 94 83 72 77 94 69 63 77 72 94 88 00 66 94 88 63 88 69 77 61 47 38 62 93 93 90 75 96 96 96 90 93 60 90 93 60 90 93 81 90 00 78 96 93 81 96 81 90 87 00 90 53 87 00 96 90 90 96 87 93 93 96 96 00 90 53 81 90 90 59 75 75 89 4280 91 73 87 62 00 94 00 94 91 98 91 80 80 83 83 92 58 80 80 67 98 80 80 98 42 89 75 96 92 55 75 87 96 76 75 91 64 92 94 96 00 78 83 89 80 83 55 53 48 82 4283 67 60 78 57 96 92 00 00 92 00 89 78 85 82 85 78 57 92 50 35 89 82 89 00 32 85 89 00 85 53 74 82 96 75 75 92 82 92 90 92 92 00 71 92 89 82 67 50 50 00 4361 75 75 78 66 86 78 83 87 79 86 81 70 64 77 64 74 44 59 63 51 87 82 68 90 54 77 64 94 89 45 74 74 85 63 62 67 63 74 81 85 71 83 /2 52 71 55 63 41 44 36 70 4440 82 57 66 66 97 88 93 91 85 28 00 77 73 86 84 88 66 66 71 64 91 68 80 93 53 75 77 91 80 48 97 91 95 77 84 91 73 77 86 86 86 62 66 75 82 62 28 48 78 4450 00 76 82 53 00 00 96 92 96 92 92 92 89 96 92 96 78 92 75 50 00 96 89 92 89 85 82 96 96 67 92 92 89 85 82 89 85 92 88 92 92 96 96 82 92 78 92 64 85 89 86 4062 70 83 74 48 80 77 80 83 67 80 80 70 61 83 80 80 54 64 58 67 93 77 58 96 51 67 83 93 87 48 64 87 87 74 83 74 67 90 74 90 **83 90 67 67 63 58 58 51 41 54 73** 4321 62 52 70 60 N6 78 92 88 80 90 88 64 74 78 76 78 56 66 68 41 92 74 76 94 45 68 54 98 72 50 66 80 78 70 72 78 72 74 78 84 74 78 70 62 72 70 72 56 54 50 72 4322 4361 4541 4543 79 69 75 52 93 87 93 92 88 91 90 77 73 86 82 85 61 73 69 59 93 80 74 95 52 82 77 96 87 54 78 85 90 75 76 82 72 84 85 91 86 90 82 67 82 73 77 56 51 51 78 DISO 43 69 78 56 95 91 95 95 00 00 95 86 86 91 56 86 47 82 52 39 91 73 #2 95 39 56 82 95 91 47 86 86 95 91 86 95 91 95 86 00 00 95 78 60 86 91 52 65 39 56 19 4353 95 71 61 71 90 95 95 90 00 00 00 71 80 95 80 85 57 85 76 76 93 90 00 95 42 85 90 95 00 76 80 66 95 57 71 95 71 00 95 00 00 80 00 80 00 80 00 80 52 52 44 4041 85 60 85 45 95 95 90 95 90 95 75 90 90 95 70 85 90 60 95 55 75 90 35 85 85 95 95 95 95 85 70 80 95 95 85 90 90 70 80 70 80 85 6U 30 35 81 4113 83 74 74 62 97 00 00 00 97 97 83 86 93 97 00 86 90 95 67 93 86 83 97 65 95 97 97 72 93 90 00 88 90 97 93 97 93 97 95 95 88 90 81 83 97 79 74 72 39 42 10 75 60 77 57 83 80 86 95 71 86 84 69 69 77 65 72 59 71 50 53 93 80 77 92 50 62 74 95 89 51 78 69 90 78 68 86 53 75 90 87 89 92 86 75 80 74 77 50 42 50 14 47 30 89 78 71 65 97 97 97 97 97 97 97 97 94 81 94 96 86 81 00 86 73 94 86 68 97 68 92 94 97 94 68 86 89 97 78 84 94 00 97 92 97 00 97 86 09 92 76 89 78 57 73 dd 4271 78 65 81 63 81 63 81 86 84 86 73 76 71 60 81 44 71 68 52 92 60 76 86 28 73 63 52 84 36 86 71 81 57 63 73 52 71 76 81 89 81 84 63 73 60 63 42 31 23 67 4340 88 71 88 76 95 95 96 00 00 98 91 85 86 91 95 91 63 86 63 61 86 86 68 98 58 86 83 98 96 60 90 91 91 76 80 91 90 93 93 96 90 93 88 78 91 78 30 71 56 48 84 5410 76 73 66 55 96 89 96 92 85 94 96 78 77 92 83 90 52 75 61 60 92 77 83 97 50 84 84 98 95 65 83 84 91 79 82 91 78 89 89 92 89 94 77 70 91 77 88 63 49 60 du **4580** 15 10 48 72 77 64 97 89 96 96 97 96 94 76 76 88 88 60 80 85 57 89 72 77 96 56 73 81 00 94 67 85 86 97 86 89 C8 69 88 94 96 80 96 78 64 73 73 77 61 60 53 dt -620 81 70 75 42 92 88 94 95 91 94 93 80 78 88 82 87 61 81 71 60 91 77 78 95 51 79 82 97 93 61 85 83 93 79 79 89 76 88 90 94 90 93 83 74 84 76 81 64 49 54 at OISE 84 74 74 63 95 90 94 95 90 92 94 83 81 88 84 90 61 78 74 60 94 83 77 95 53 80 82 94 89 60 81 88 91 78 83 89 78 89 89 93 87 93 81 75 84 77 86 66 55 56 81 82 73 81 63 94 91 93 63 90 92 90 83 78 87 85 91 60 /3 75 58 93 61 75 94 54 80 81 94 88 58 80 87 91 76 85 90 79 90 87 96 88 94 86 /4 86 79 83 65 49 53 81 O1 58 83 73 79 57 90 88 91 91 87 80 59 17 13 84 80 06 51 74 67 52 92 77 72 93 48 80 80 93 87 58 80 84 90 74 79 86 71 86 87 94 85 91 82 71 84 75 77 60 43 47 16 01.5: 75 69 75 62 93 87 93 92 85 91 90 77 13 86 82 85 61 73 69 59 93 80 74 95 52 82 77 96 87 54 78 85 90 75 76 82 72 84 85 91 86 90 82 67 82 73 77 56 51 51 10 0150 81 70 75 62 CZ 88 94 95 9; 94 93 80 78 04 82 87 61 C1 71 60 91 77 78 95 51 79 82 97 93 61 85 83 93 79 79 89 76 88 90 94 90 93 83 74 84 To 81 64 49 54 31 STOT 82 72 77 61 93 89 93 93 84 91 91 80 75 54 83 60 60 75 71 57 93 79 75 94 51 80 40 94 88 58 81 85 91 76 80 87 75 87 87 93 87 92 83 72 84 76 81 62 49 52 88



49

READING/LANGUAGE ARTS - LEVEL 4

INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of fifty multiple choice items measuring selected objectives in the curriculum strands of Study Skills (10 items), Language Structure (10 items), Literal Comprehension (6 items), Interpretive Comprehension (9 items), Evaluative Comprehension (5 items), and Vocabulary (10 items). In addition there are Dictation and Writing portions that address the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage.

The test was organized according to the following domains with each domain containing ten items: Study Skills, Language Structure, Listening, Vocabulary, and Reading.

The population includes all students enrolled in grade 4 who took an on-level test and for whom valid answer sheets have been submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students peformed fairly well on this test with a system-wide average score on the items of 72%. Generally, students appear to be mastering the objectives in Vocabulary and most of the objectives in Literal Comprehension, Study Skills, and Language Structure. In Literal Comprehension students had difficulty with an item addressing details in a passage (item #29). Within Study Skills students are having difficulty with alphabetical order and putting unorganized information into categories (item #'s 4 and 10). In Language Structure students do not appear to be mastering identifying tenses of sentences, prefixes, suffixes, and compound words (item #'s 11 and 19).

The most deficits as strands are found in the Interpretive and Evaluative Comprehension areas. In Interpretive Comprehension students are not mastering the objectives addressing the mainplot/subplot (item #'s 23 and 44). More than forty percent of the students did not correctly answer both items addressing fact/opinion in Evaluative Comprehension (item #'s 25 and 27).



DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL READING/LANGUAGE ARTS - LEVEL 4

1985 - 1986

SI	TU[LS		_						- 1	LANGUAGE STRUCTURE				İ	LISTENING							I	VOCABULARY									READING										
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J.3 Putting words into alph. order	.3 J	.) Ostring parties of book to time into	[J.7] Using reference sources to locate info.)	T. Y Unorganized info. into catagories		7*:2		K.6 \ Identifying tense of sentences	7.2	_	K.4 \ Syllabication		_	K.2 Identifying comp. wds., pref., is suff.	K.2	B.3 Details	feel trace	Main plot/subplot	Writer's n	op tu ton		رد	B.3 Details	D.1 Drawing comparisons w. own experience	2)	E.2 Synonyme		E.2)	•		E.5) Miltiple meanings	.47		2.	-	C.4 Inferring cause and effect relation.	.5 Main p t/subplot	<u>.</u> (5.2 Main idea	~	C.4) Inferring cause and effect relation.	D.2 Predicting further outcome



NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY .. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 THIAL 91 77 69 58 66 88 63 94 94 41 38 61 72 94 83 88 72 52 36 94 88 91 50 69 50 61 44 63 36 83 97 91 80 75 66 88 83 80 86 88 86 58 63 30 75 75 88 63 61 41 71 00 93 93 53 80 00 86 86 93 40 53 73 66 86 93 00 40 46 46 86 00 00 53 93 46 86 66 40 53 73 93 00 66 80 80 80 80 80 80 93 53 73 26 93 93 93 00 80 80 80 73 81 88 77 59 66 6- 92 96 96 59 51 55 81 92 85 96 62 66 70 81 00 96 51 77 77 74 66 77 62 88 96 00 85 88 55 74 85 92 92 81 74 66 77 44 74 74 88 81 81 62 78 85 80 60 55 90 90 85 95 45 65 60 75 85 75 80 70 45 35 80 95 75 55 55 45 75 35 80 35 50 90 90 65 65 55 90 80 80 75 80 80 75 75 40 65 80 80 70 85 70 71 4221 75 85 71 39 50 78 75 96 ** 32 28 53 71 75 78 82 64 53 25 57 92 82 57 60 17 78 42 71 53 75 85 96 50 46 46 75 67 67 78 64 75 17 78 14 64 71 75 71 50 32 63 45.70 94 72 78 56 51 94 81 97 97 51 43 67 64 72 72 91 86 48 45 86 97 86 37 64 43 83 70 75 54 91 09 97 67 70 64 81 62 70 83 86 83 59 62 43 89 78 86 67 72 64 72 90 82 69 58 59 85 79 93 91 46 40 79 72 83 75 87 77 70 45 79 95 98 69 70 45 53 46 75 54 87 90 95 82 75 72 82 82 75 83 77 82 58 83 43 77 80 79 82 75 61 74 93 66 66 63 93 96 93 00 96 63 70 70 63 93 96 96 66 70 53 93 00 00 70 73 70 66 73 86 70 93 00 96 93 80 76 00 90 90 83 86 93 70 86 33 86 00 00 76 80 63 d2 40 to 87 87 82 68 86 91 93 94 93 56 48 79 79 93 79 89 74 74 58 84 96 91 51 79 60 72 72 81 43 82 96 94 74 77 68 86 84 93 86 74 82 60 74 34 81 91 87 79 79 65 78 42 40 87 91 75 58 41 95 91 87 91 54 50 62 66 91 91 95 75 66 37 91 00 91 54 79 58 83 79 70 54 95 91 00 54 70 37 91 83 95 79 66 87 50 70 16 75 95 95 79 79 62 75 4241 4270 94 84 57 52 42 84 63 84 89 36 36 63 52 94 94 94 42 63 36 84 94 00 57 73 42 57 52 57 52 00 00 94 68 68 57 89 52 73 94 78 68 31 57 42 78 73 84 68 68 47 63 00 95 83 33 79 91 87 91 95 41 79 58 79 87 91 00 70 70 54 91 95 00 62 75 54 58 50 33 41 83 95 00 79 75 70 83 95 91 95 83 70 62 83 25 87 83 83 62 79 79 70 76 64 72 20 52 76 68 72 92 40 32 56 72 72 76 84 32 36 44 80 en 96 52 76 32 60 40 60 36 80 80 92 64 56 48 80 88 68 88 68 88 68 36 64 76 92 56 72 44 63 4371 96 ** 75 71 78 93 87 93 ** 59 62 65 84 90 90 93 65 59 34 96 93 96 53 81 68 59 68 90 53 87 96 96 ** 68 56 87 78 91 87 78 87 59 76 53 81 84 87 68 37 79 44 30 90 83 75 56 66 90 83 92 94 51 50 67 73 87 83 90 67 61 47 85 96 93 57 74 51 69 59 71 50 84 94 95 76 72 63 85 80 82 85 79 81 55 75 36 78 82 87 75 75 75 76 77 78 91 70 54 37 37 91 91 97 86 25 83 83 83 87 91 79 66 45 87 00 91 75 62 41 91 54 79 45 83 95 00 91 83 70 91 75 91 79 83 95 66 79 29 75 83 83 58 70 54 74 87 87 96 25 50 81 43 68 81 37 31 68 81 00 75 87 81 62 25 93 00 93 56 75 43 43 62 68 25 81 00 00 81 62 62 81 75 62 87 68 60 25 62 25 81 75 75 50 50 17 00 40 31 ●● 86 89 55 72 93 75 89 89 41 34 68 62 ●● 93 86 72 62 37 79 96 ●● 48 75 24 58 58 68 20 86 89 86 86 62 37 79 68 72 89 79 82 62 48 27 65 79 79 40 55 58 69 4361 92 76 64 44 36 88 72 88 88 36 44 68 52 88 76 88 52 40 72 80 88 96 56 80 52 72 48 72 44 84 92 88 52 64 48 80 68 80 64 72 72 44 76 32 64 84 92 63 76 44 ; 93 87 81 53 5" 93 81 93 91 48 34 61 63 95 87 85 75 65 40 81 95 00 67 75 46 69 61 83 40 75 95 97 81 77 63 89 83 79 77 73 79 69 79 32 81 77 87 79 71 57 7. 90 85 76 57 54 92 67 90 93 46 60 70 73 95 81 96 76 60 40 93 96 95 54 76 34 70 53 65 40 87 95 00 73 57 70 89 76 84 76 73 79 53 78 34 70 79 87 70 64 42 7. 00 83 66 55 44 88 72 88 83 55 72 83 61 83 90 94 72 55 27 83 94 94 77 77 27 44 38 38 33 94 94 94 83 50 55 94 83 77 46 77 83 33 83 33 72 88 88 72 66 38 70 4561 91 92 72 45 50 90 85 95 96 50 28 62 67 74 79 87 66 55 33 93 93 91 50 81 51 73 54 63 38 78 96 00 68 61 48 79 74 73 79 84 73 42 67 38 65 75 75 72 57 46 61 4420 96 96 83 66 71 92 92 92 81 92 67 77 84 88 84 79 80 75 84 88 94 86 C4 98 86 92 86 84 73 86 86 94 62 64 75 TO 84 79 86 77 83 49 75 43 67 73 71 73 75 81 31 40 70 88 66 55 55 50 77 77 85 7/ 50 55 83 83 83 83 86 61 55 72 88 83 38 66 77 55 44 88 38 77 88 88 77 72 50 88 77 77 77 77 94 66 50 94 27 66 77 83 66 66 12 70 40 80 98 93 82 56 52 88 77 94 93 62 29 57 53 81 78 88 66 68 45 64 93 92 54 73 54 76 50 50 36 81 94 92 60 49 74 82 85 81 88 81 72 54 52 33 62 81 85 60 60 57 16 4151 81 76 62 53 59 89 75 79 89 37 46 56 65 82 82 90 53 50 25 68 93 92 57 71 43 60 42 68 35 81 89 89 65 48 59 84 75 75 73 62 67 51 73 35 67 76 67 65 56 62 40 41 90 94 81 71 76 52 92 97 97 94 44 63 84 76 89 78 86 84 71 60 81 97 94 65 94 84 73 73 63 42 78 94 94 76 73 52 97 97 89 86 65 73 52 89 18 84 81 89 76 78 13 77 84 81 71 43 43 93 84 90 90 37 40 68 43 84 84 87 75 56 43 90 ** ** 56 68 46 78 75 53 43 84 96 93 62 62 53 90 31 75 81 68 90 90 78 43 84 81 93 84 87 78 73 4200 96 96 85 85 96 92 92 96 92 46 92 89 96 82 92 96 85 71 78 96 96 96 78 71 67 57 50 57 50 78 96 67 60 53 96 75 75 92 71 64 75 57 28 67 71 78 64 67 53 17 4201 46.70 92 85 73 54 56 90 80 90 90 51 46 68 67 85 83 88 71 61 46 85 95 93 61 77 53 70 57 67 41 82 93 94 70 61 60 86 79 78 80 75 76 54 71 33 70 78 81 69 60 51 72 83 90 81 74 55 93 81 79 88 55 53 62 72 88 79 86 55 53 67 74 88 95 55 76 67 60 53 58 53 74 90 95 74 79 62 81 76 69 81 76 74 53 69 37 67 69 79 83 67 60 12 92 91 73 46 55 89 82 91 89 48 39 80 69 89 82 91 76 69 46 83 00 96 55 80 62 60 62 39 41 83 98 96 73 73 60 94 78 73 71 69 73 41 76 32 76 82 89 71 66 70 75 41 30 4131 00 86 7U 43 33 93 8U 90 93 20 40 60 53 90 86 90 50 53 53 86 86 90 73 73 40 50 36 70 26 7U 94 96 60 56 56 90 86 90 83 76 60 63 40 63 76 83 66 73 71 63 4140 4150 95 85 73 42 57 80 71 92 88 42 42 61 66 85 71 80 61 50 42 76 95 95 54 64 23 61 35 47 42 64 86 92 54 42 71 85 64 78 83 73 76 42 61 23 64 76 76 61 69 45 61 87 83 72 53 55 91 81 90 83 55 46 75 73 85 83 92 47 56 37 80 94 91 51 72 40 75 54 71 48 73 94 93 73 60 63 76 73 72 75 67 71 45 63 45 70 70 85 63 61 6 4250 91 83 58 43 61 80 83 80 83 47 27 53 67 74 84 49 69 58 62 69 92 89 43 67 50 55 43 56 32 71 87 92 69 61 37 76 67 74 80 70 65 29 50 30 57 78 80 62 40 47 00 4340 90 84 74 50 62 81 74 96 94 58 23 63 69 83 81 37 69 58 41 87 98 95 54 68 60 72 55 70 43 74 91 89 75 71 55 75 81 78 84 77 78 50 70 22 68 78 91 77 64 63 71 4350 96 ** 76 65 80 80 76 92 96 65 42 34 61 88 88 88 46 65 53 92 96 96 73 80 61 69 46 84 38 76 96 ** 84 65 73 88 84 76 80 92 84 50 80 26 80 80 92 65 88 55 7 4390 89 84 68 42 36 84 73 84 89 21 57 63 57 ** 84 84 73 73 31 84 ** 94 42 73 57 73 57 84 42 78 89 89 73 73 42 94 78 78 73 84 84 68 78 21 78 63 84 57 52 51 70 4391 95 81 75 67 67 98 91 92 94 62 50 74 77 90 94 94 87 81 45 90 97 98 65 88 75 62 61 81 28 84 88 98 78 70 61 80 82 81 85 78 81 50 74 27 87 81 88 77 78 65 11 44 00 99 76 60 60 88 96 72 00 96 44 52 52 64 96 88 88 92 72 88 96 00 96 84 72 48 72 48 84 32 72 96 96 68 48 60 92 84 72 84 84 64 40 80 12 56 76 92 56 68 50 7. 00 95 75 33 50 79 60 75 d7 41 33 62 62 79 83 87 83 70 41 87 91 87 41 58 29 58 33 50 45 66 45 94 66 45 54 83 75 75 79 54 75 50 62 16 62 83 83 54 45 45 65



5.1

941 RO LEVE 4

TELR 5005

PERCENTAGE OF CURRECT ANSWERS PER LIEM

11/07/86

NOTE 100 PERCENT UN A PARTICULAR ITEM IS INDICATED BY .. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 46 45 46 47 48 49 50 161741 SCHL 00 94 66 33 55 94 00 94 94 55 33 55 66 00 00 00 83 55 55 94 83 00 77 83 5 61 50 88 44 72 88 94 72 61 55 77 83 83 88 77 55 55 72 22 61 88 94 77 72 83 13 4052 97 85 79 53 63 86 84 89 92 58 53 78 69 80 89 92 71 69 42 83 97 98 70 85 51 64 50 83 55 85 % 94 73 79 59 85 85 79 77 76 82 51 72 23 79 79 94 65 78 59 75 4100 00 90 85 45 85 95 85 95 00 45 55 70 75 95 00 90 90 75 95 00 95 90 85 90 85 80 95 50 95 90 00 95 80 50 90 90 95 75 85 40 90 40 65 80 90 85 85 60 d2 00 90 45 54 81 00 00 00 81 63 63 81 90 00 00 72 90 18 81 00 00 27 72 45 54 54 72 27 54 00 00 81 54 81 90 72 90 72 81 54 63 90 18 90 81 00 72 63 72 70 4121 96 66 70 51 55 77 00 92 96 55 44 81 74 85 96 00 55 44 37 85 00 00 51 62 18 44 55 70 40 88 96 96 66 48 59 77 74 88 92 92 81 55 81 14 74 88 85 62 74 48 71 45.30 ** 81 90 36 36 72 81 ** ** 45 63 63 63 ** 81 ** 90 90 63 ** ** ** ** 72 81 81 54 54 45 45 81 81 90 72 36 72 90 81 90 81 72 90 72 81 18 63 81 90 72 90 63 75 4531 4590 84 84 64 56 80 00 92 00 00 60 76 80 76 00 96 92 84 80 40 92 00 92 72 00 60 84 72 76 32 76 00 84 68 60 96 72 92 72 84 80 52 80 32 72 76 84 72 72 56 73 00 00 87 75 62 00 87 87 00 37 37 62 50 75 62 00 50 75 75 00 00 00 00,62 75 75 37 50 62 50 75 00 87 62 37 87 50 75 00 75 02 62 50 50 75 87 87 75 62 50 74 4592 91 85 74 51 56 91 81 95 91 63 46 62 53 80 82 90 74 64 45 84 93 91 53 59 45 58 39 73 40 76 91 87 63 59 57 78 78 80 81 84 73 47 80 28 67 85 85 68 68 48 10 46 33 93 85 73 52 61 88 82 90 91 54 45 67 68 86 85 90 70 65 49 84 95 94 59 74 52 65 52 73 42 77 92 94 72 65 58 83 78 79 81 76 75 48 71 30 71 79 87 69 68 57 72 DISC 85 91 67 47 61 85 82 85 79 52 50 64 73 79 79 88 79 55 44 79 00 97 41 79 32 70 44 76 47 82 94 97 79 67 55 91 91 88 73 73 85 55 50 26 70 79 76 61 61 38 70 95 84 69 58 76 82 80 82 91 67 50 69 65 86 82 91 63 52 32 86 93 97 80 67 45 76 63 71 43 80 89 93 80 73 80 84 67 76 80 69 76 47 71 23 71 80 78 58 63 41 71 4280 87 82 78 52 67 87 87 91 92 60 40 68 62 90 90 97 81 65 40 87 95 94 38 80 54 57 62 77 50 78 94 95 70 78 55 84 74 92 82 77 82 42 78 24 80 78 85 62 70 64 /3 4283 95 95 90 55 95 00 00 95 90 55 80 75 00 00 00 00 05 95 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 95 00 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PERCENTAGE OF CORRECT ANSWERS PER STEM

11/07/86

READING/LANGUAGE ARTS - LEVEL 5

INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of sixty-five multiple choice items measuring selected objectives in the curriculum strands of Study Skills (10 items), Language Structure (10 items), Literal Comprehension (12 items), Interpretive Comprehension (14 items), Evaluative Comprehension (9 items), and Vocabulary (10 items). In addition there are Dictation and Writing portions that address the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage. The test serves as both the final examination and the State Basic Skills Test for grade 5 students.

The test was organized according to the following domains: Study Skills, Language Structure, Reading, Listening, and Vocabulary. Reading contains twenty-five items and the other domains contain ten items each.

The population includes all students enrolled in grade 5 who took an on-level test and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed only fairly well on this test with a system-wide average score on the items of 67%. Generally, students appear to be mastering the objectives in Evaluative Comprehension and most of the items in Literal Comprehension and Study Skills. Within these latter two domains there are isolated objectives which are not being mastered by more than forty percent of the students. Within Literal Comprehension students had difficulty with a main idea item (# 54) and within Interpretive Comprehension students had difficulty with key points in a passage (item # 21) and inferring traits and feelings of characters (item # 22).

The most deficits as strands are found in the areas of Vocabulary and Language Structure. There are two items in Vocabulary and three items in Language Structure which fewer than fifty percent of the students answered correctly. In the first domain students had difficulty with synonyms and antonyms (item #'s 56 and 58) and in the second domain students had difficulty with the items that tapped types of sentences, parts of speech, complete subject, and complete predicate (item #'s 14, 15, and 18).



DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

READING/LANGUAGE ARTS - LEVEL 5

1985 - 1986

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951 RD LEVE 5 TEUR5005 11/07/80
PERCENTAGE OF CORRECT ANSWERS PER TIEM
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951 RD LEVE 5 TECR5305 11/37/36
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81 83 4113 73 88 65 69 88 88 80 57 73 30 92 76 •• 84 76 96 61 57 80 92 46 45 65 80 84 88 73 92 80 61 73 96 65 69 73 96 69 84 84 84 4210 75 85 75 57 85 70 82 82 67 42 65 60 95 65 55 72 45 50 65 62 37 55 72 57 75 82 55 92 65 67 85 92 52 87 80 •• 75 85 82 67 73 92 87 73 89 75 76 67 82 58 63 31 66 48 46 74 63 "2 58 50 50 47 54 69 77 80 73 90 69 70 77 87 61 81 81 94 60 79 81 70 88 94 91 73 91 85 73 67 79 55 76 58 94 61 67 91 64 50 79 67 61 38 50 73 91 79 85 97 76 61 88 97 64 94 82 97 70 85 76 55 81 96 90 72 90 93 72 84 69 60 66 57 75 66 60 66 54 48 24 63 66 60 66 66 84 75 78 93 84 66 78 90 72 87 90 ** 78 87 87 90 4410 70 88 68 60 78 67 62 57 50 24 65 55 70 47 49 77 51 22 21 36 36 39 50 54 72 72 39 70 60 59 55 77 36 75 78 85 55 68 70 67 80 86 78 66 87 69 65 60 60 41 44 41 58 46 42 75 45 29 38 48 43 41 57 67 77 74 60 86 63 63 75 88 46 74 73 84 67 65 76 71 72 87 76 58 82 67 53 56 65 35 51 51 68 47 36 70 46 40 55 55 36 35 53 50 76 71 66 78 60 56 61 87 45 77 66 86 47 67 67 58 DISE 76 89 80 66 86 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951 PD LEVE 5 TECR5005 11/07/86
PERCENTAGE OF CORRECT ANSWERS PER LIEM
NUTE 100 PERCENT UN A PARTICULAR LIEM IS INDICATED BY **

SCHL 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 52 68 64 65 TOTAL 04 71 71 11 64 78 92 71 92 78 28 78 35 50 71 57 ** 50 71 92 64 64 92 35 92 74 4100 72 68 70 86 70 93 97 86 98 91 62 59 51 39 79 58 93 48 58 72 75 70 91 71 93 76 71 71 70 71 66 71 90 28 95 95 57 52 57 61 80 42 85 28 52 38 42 61 ** 38 95 65 54 45 72 72 72 81 ** 81 90 90 54 72 81 18 81 27 72 81 45 90 72 54 81 63 ** 66 4121 4530 61 72 63 80 63 86 94 75 91 86 91 91 88 75 83 58 86 80 86 80 75 91 88 72 88 77 4531 58 52 47 10 58 82 76 54 ** 94 29 52 52 52 41 35 16 35 35 47 58 64 70 29 76 60 4590 51 48 48 58 51 79 96 82 93 96 82 68 55 27 86 27 82 34 55 37 68 68 82 65 82 63 75 ** 75 ** 50 50 ** ** ** 75 0 75 75 75 75 ** 50 50 25 25 25 ** ** ** 75 4592 4630 56 69 67 64 55 87 86 76 84 80 73 46 50 40 70 35 83 47 66 52 72 55 84 53 76 66 65 66 65 69 65 79 90 73 91 88 51 53 49 38 70 47 84 45 55 56 59 65 85 56 85 67 DISC 78 69 60 76 52 73 95 73 95 82 39 56 56 39 78 65 ** 43 43 65 60 60 91 56 91 73 4260 4280 67 61 74 61 67 93 96 90 96 96 90 96 93 87 96 58 37 48 61 70 77 70 93 67 90 76 4283 58 58 58 71 58 69 84 63 89 76 41 56 67 32 67 52 84 43 73 56 41 56 84 58 89 65 75 50 62 56 50 68 87 87 93 68 37 43 13 18 75 50 87 43 43 50 50 37 87 37 87 31 4640 47 55 61 57 47 67 91 67 89 83 35 49 40 32 72 33 64 18 33 32 37 42 64 42 72 56 46 56 79 76 66 72 73 81 93 76 91 94 48 59 38 37 75 39 88 47 61 68 74 72 87 67 90 70 4062 67 76 61 73 82 88 91 88 97 82 44 50 35 23 85 41 88 41 67 64 61 76 94 67 94 70 4321 72 01 44 83 50 66 94 88 88 88 55 88 61 61 72 33 88 55 72 72 61 77 ** 55 88 66 60 35 43 56 43 70 81 56 81 79 31 41 39 29 68 41 81 31 45 41 43 50 66 27 75 53 4322 4361 52 52 47 47 58 76 68 88 ** 47 41 35 17 82 52 88 29 52 64 52 58 82 70 76 58 66 52 80 76 66 80 85 80 95 ** 71 76 60 57 80 42 95 47 66 61 61 57 95 52 95 66 4541 52 56 76 60 80 80 92 76 96 88 64 80 60 52 84 48 92 32 55 52 56 64 76 72 76 66 4543 DISD 04 60 61 66 61 76 90 75 91 86 48 59 49 39 76 44 84 39 56 56 56 60 82 55 85 65 50 59 59 59 59 90 90 77 90 ** 59 90 54 40 86 27 90 27 45 50 45 54 77 54 90 66 4353 81 74 67 62 72 81 ** 79 95 95 44 69 58 58 74 39 97 37 58 58 51 67 95 72 90 69 4061 4113 80 57 84 61 65 73 80 73 8d 92 61 50 53 42 76 42 84 38 57 46 38 69 84 53 92 72 60 52 52 57 55 82 ** 75 97 92 57 55 67 45 82 47 77 32 55 60 57 75 85 47 85 68 4210 4230 68 70 67 71 68 75 90 74 91 89 39 54 49 33 75 40 83 46 58 62 54 67 85 60 90 68 70 67 79 82 73 82 94 88 97 82 52 70 58 44 82 38 91 52 70 58 64 67 97 64 97 74 42 71 4360 72 81 81 75 81 87 73 81 93 90 84 75 63 60 96 60 90 57 69 69 66 81 96 84 84 76 4410 62 49 55 50 52 83 90 83 86 91 77 70 55 47 65 34 83 47 54 47 49 67 83 57 83 61 4580 63 60 58 61 04 88 90 74 91 78 53 61 42 31 67 48 75 46 64 63 55 68 81 58 84 63 4620 63 60 62 66 52 73 86 72 75 82 38 42 36 16 76 35 87 36 45 48 61 50 76 53 88 60 63 64 64 63 80 91 76 89 87 52 60 50 37 75 41 84 43 57 57 55 66 84 60 88 66 DISE DISA 67 64 65 69 66 79 91 69 91 85 50 60 55 35 72 44 84 43 61 60 61 67 83 65 88 68 64 64 64 67 63 79 91 75 89 89 48 51 52 38 70 41 85 40 53 61 63 64 84 62 87 67 DISB DISC 65 66 65 69 65 79 90 73 91 88 51 53 49 38 70 47 84 45 55 56 59 65 85 56 85 67 DISD 64 00 61 66 61 76 90 75 91 86 48 59 49 39 76 74 84 39 56 56 56 60 82 55 85 65 66 63 64 64 63 80 91 76 89 87 52 60 50 37 75 41 84 43 57 57 55 66 84 60 88 66 DISE STUT 65 64 64 61 64 79 90 74 90 87 50 56 51 38 73 43 84 42 56 58 59 64 84 59 80 67



READING/LANGUAGE ARTS - LEVEL 6

INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of forty-five multiple choice items measuring selected objectives in the curriculum strands of Study Skills (10 items), Language Structure (10 items), Literal Comprehension (5 items), Interpretive Comprehension (7 items), Evaluative Comprehension (3 items), and Vocabulary (10 items). In adthere is a Writing portion that addresses the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage.

The test was organized according to the following domains Listening, Study Skills, Language Structure, Vocabulary, and Reading. Listening contained five items and the other domains each had ten items.

The population includes all students enrolled in grade 6 who took an on-level test and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed fairly well on this test with a system-wide average score on the items of 74%. Generally, students appear to be mastering the objectives in Evaluative Comprehension and most of the items in Literal Comprehension and Study Skills. Within these two domains there are isolated objectives which are not being mastered by more than forty percent of the students. Within Literal Comprehension students had difficulty identifying a sequence of events based on a story (item # 36 and within Study Skills students had difficulty using parts of a book to find information (item # 14).

Greater deficits as strands were found in the areas of Interpretive Comprehension, Vocabulary, and Language Structure. There are two items in Interpretive Comprehension and in Vocabulary and three items in Language Structure which more than forty percent of the students answered incorrectly. In Interpretive Comprehension students had difficulty inferring cause and effect relationships (item # 3) and in Vocabulary the difficulties lay with antonyms and homonyms (item #'s 28 and 35. In Language Structure students had difficulty with identifying prefixes and root words, tenses, and syllabication. (item #'s 18, 21, and 24).



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DEPARTMENT OF EDUCATIONAL TESTING

1985 - 1986

CURRICULUM REFERENCED FINAL RLADING/LANGUAGE ARTS - LEVEL 6

LISTENING	STUDY SKILLS	Language Structure	VOCABULARY	READING
1 2 3 4 5	$\begin{smallmatrix}&&&1&1&1&1&1&1\\6&7&8&9&0&1&2&3&4&5\end{smallmatrix}$	1 1 1 1 2 2 2 2 2 2 2 6 7 8 9 0 1 2 3 4 5	2 2 2 2 3 3 3 3 3 3 6 7 8 9 0 1 2 3 4 5	3 3 3 3 4 4 4 4 4 4 6 7 8 9 0 7 2 3 4 5
B.2 Main idea B.3 Details C.4 Inferring cause and effect relation. C.8 Interpreting figurative language D.3 Fact/opinion	J.3 Putting words into alph. order J.4 J.4 J.7 Using reference sources to locate info. J.5 J.5 Using parts of book to find info.	K.2 K.2 K.2 K.6 K.6 K.6 K.6 K.4 K.4 Syllabication	E.2 Antonyms E.2 Antonyms E.3 Word meanings E.3 Word meanings E.5 Hultiple meanings E.4 Homonyms	B.4 Identifying the sequence C.1 Fiction/non-fiction C.3 Inferring traits, feelings, 6 motives C.6 Interpreting figurative language D.2 Predicting further outcome B.2 Main idea B.3 Details C.4 Infering cause and effect relation. C.6 Writer's purpose D.7 Name of the comparisons w. own experience



961 RD LEVE C RECT ANSWERS PER LITEM
NUTE 130 PERCENT UN A PARTICULAR LITEM IS INDICATED BY **

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 101AL 2130 90 84 33 72 76 91 89 84 95 95 78 58 89 53 49 85 73 52 40 54 52 64 74 62 87 82 77 59 68 89 75 79 84 89 55 59 78 80 85 66 78 79 56 73 65 76 2170 83 79 41 89 71 90 83 80 99 98 84 86 93 52 99 83 63 40 88 71 51 89 66 55 86 89 74 57 71 86 83 90 82 81 57 58 70 76 96 55 94 86 59 79 80 77 76 80 30 80 50 80 80 65 •• •• 80 50 76 61 96 61 65 38 80 42 57 69 65 65 76 73 65 26 42 69 57 61 80 80 34 42 76 57 84 46 73 65 46 61 61 65 2060 80 10 20 66 42 80 76 64 45 95 92 52 71 38 95 04 52 59 92 40 47 73 54 34 71 73 71 50 61 80 76 73 66 80 38 28 57 64 85 47 61 69 40 47 50 63 2370 69 83 33 99 73 89 88 81 98 97 80 69 88 58 98 82 59 50 86 67 59 83 69 56 88 88 83 54 69 88 86 86 82 87 50 62 69 79 86 69 83 81 67 72 71 76 2240 90 65 32 91 68 86 79 75 97 97 87 56 90 36 98 69 68 53 87 53 46 84 64 98 83 90 76 47 57 90 76 83 83 86 . 46 71 79 89 61 83 71 36 69 65 71 DISA 87 79 34 88 69 88 84 78 97 97 82 66 88 51 98 78 64 53 88 61 53 83 68 57 85 85 77 53 66 86 79 83 81 85 50 54 71 76 88 61 82 78 54 71 63 74 2110 85 79 33 87 45 81 77 66 97 97 77 56 87 47 97 81 64 45 93 54 39 85 50 35 85 89 64 39 56 85 79 77 79 89 45 60 58 77 87 60 75 62 47 58 66 67 2120 93 77 38 95 82 79 87 87 98 98 82 85 96 46 98 72 69 46 96 59 53 87 64 51 80 91 75 43 59 85 87 88 83 91 48 61 80 85 90 72 85 80 51 87 79 76 2140 93 75 41 95 72 88 90 84 98 97 85 64 91 54 98 86 65 72 95 68 67 89 68 48 93 87 80 57 73 89 91 82 80 89 53 59 66 83 91 72 85 82 56 68 69 78 2200 89 83 35 92 75 86 83 77 97 98 86 68 95 52 95 82 64 56 90 66 57 88 58 38 52 86 78 56 68 91 84 89 87 92 59 62 67 81 88 67 86 80 52 73 74 76 2950 90 73 45 91 71 84 86 70 97 97 92 67 92 66 93 80 66 60 85 58 57 83 68 48 92 85 76 51 73 94 88 70 79 92 48 54 64 76 85 67 80 69 51 73 63 74 DISB 91 77 40 92 71 85 86 77 97 97 86 68 93 50 96 81 65 59 91 62 58 86 64 45 90 87 76 52 69 90 87 80 82 91 52 58 67 80 88 68 83 76 52 72 69 75 2030 09 10 40 63 00 63 04 73 97 97 78 55 62 51 96 75 60 41 89 54 53 75 55 56 82 77 76 41 55 80 76 77 79 82 39 41 59 66 84 47 75 71 45 66 57 69 2080 75 62 58 96 76 76 71 82 98 99 88 64 98 51 ** 86 70 55 95 67 57 90 71 38 96 90 40 49 63 98 90 88 89 93 53 64 75 85 92 80 90 90 60 75 75 80 2180 84 83 45 87 62 83 89 72 97 96 84 58 87 45 97 74 66 56 85 54 42 75 62 39 87 76 74 52 61 82 71 78 67 75 56 65 53 75 83 61 73 68 51 69 69 70 2090 76 19 21 92 66 87 86 75 96 98 77 58 83 38 97 70 74 49 85 71 51 88 53 42 89 83 69 39 58 84 80 78 80 84 55 59 61 78 92 68 80 78 49 71 51 71 2190 01 1 45 86 62 90 89 81 98 98 88 67 97 57 97 81 74 50 83 60 63 85 57 47 81 80 72 58 65 83 7 83 81 81 49 62 68 78 91 62 79 76 49 66 60 74 2260 50 05 40 90 67 90 81 74 96 98 92 60 89 56 96 81 69 54 89 47 50 78 54 56 90 87 76 41 70 80 80 90 81 85 52 58 49 90 87 63 74 78 47 70 63 73 DISC 86 80 42 87 66 87 87 76 97 97 83 60 87 50 97 77 67 49 88 59 53 81 58 47 86 80 75 47 60 83 78 81 79 82 49 56 61 76 87 61 78 75 49 68 63 72 2010 92 93 41 90 62 94 90 84 95 96 75 60 81 50 99 82 64 60 90 65 56 83 69 65 92 85 87 60 71 80 83 86 82 87 51 60 70 76 87 60 83 80 48 69 62 75 2040 84 83 88 77 88 86 70 98 97 80 60 88 45 96 86 64 51 90 67 67 80 64 48 87 80 77 44 61 83 81 77 80 87 56 59 70 70 88 64 78 81 51 66 60 71 2350 93 82 51 94 76 93 90 79 ** ** 94 70 96 46 99 75 68 53 94 66 65 87 62 54 91 83 70 54 72 55 91 85 87 91 60 66 77 89 94 80 87 86 47 72 78 0150 90 86 43 90 71 90 88 78 97 97 83 63 88 47 98 81 65 55 91 66 63 83 65 55 90 83 78 52 68 83 85 83 88 86 66 72 78 90 68 82 82 49 69 67 76 2100 86 78 44 88 69 81 82 78 94 94 87 69 87 53 95 72 67 60 83 63 65 87 66 55 80 78 73 50 60 85 80 78 80 80 85 60 62 71 79 63 75 74 48 72 53 72 2270 83 82 64 91 64 90 75 72 98 97 88 64 85 50 97 81 53 60 89 58 48 79 58 57 82 80 78 48 65 80 77 71 64 79 45 50 60 64 83 48 73 67 54 61 55 70 2980 83 78 32 88 68 90 85 78 91 97 89 66 91 56 94 89 58 53 88 71 63 90 70 55 79 83 74 68 76 88 83 78 76 88 47 70 76 77 79 62 77 76 54 65 58 75 4360 93 81 60 91 77 °3 86 85 ** ** 80 75 88 67 93 88 55 65 95 57 52 90 72 77 90 80 88 60 63 85 75 85 68 83 50 49 60 83 81 54 75 70 42 68 72 76 DISE 85 80 49 89 69 88 81 77 97 96 87 68 88 55 95 82 59 54 88 63 57 86 66 59 82 80 77 50 67 85 79 77 73 82 46 58 65 73 80 57 75 72 50 66 58 73 0154 87 79 34 88 69 88 84 78 97 97 82 66 88 51 98 78 64 53 88 61 53 83 68 57 85 85 77 53 66 86 79 83 81 85 50 54 71 76 88 61 82 78 54 71 68 74 0158 91 77 40 92 71 85 86 77 97 86 68 93 50 96 81 65 59 91 62 58 86 64 45 90 87 76 52 69 90 87 80 82 91 52 58 67 80 88 68 83 76 52 72 69 75 DISC 86 8U 47 87 66 87 87 76 97 97 83 60 87 50 97 77 67 49 88 99 53 81 58 47 86 80 75 47 60 83 78 81 79 82 49 56 61 76 87 61 78 75 49 68 63 72 DISD 90 86 43 90 71 90 88 78 97 97 83 63 88 47 98 81 65 55 91 66 63 83 65 55 90 83 78 52 68 83 85 83 83 88 56 62 72 78 90 68 82 82 49 69 67 76 DISE 85 80 49 89 69 88 81 77 97 96 87 68 88 55 95 82 59 59 88 63 57 86 66 59 82 80 77 56 67 85 79 77 73 82 46 58 65 73 80 57 75 72 50 66 58 73 STOT 68 80 41 89 69 87 86 77 97 84 64 89 50 97 80 65 54 89 62 56 84 63 52 87 83 76 51 65 85 81 81 80 86 50 57 67 77 81 63 80 76 51 69 65 74



READING/LANGUAGE ARTS - LEVEL 7

INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of forty-five multiple choice items measuring selected objectives in the curriculum strands of Study Skills (10 items), Language Structure (10 items), Literal Comprehension (4 items), Interpretive Comprehension (7 items), Evaluative Comprehension (4 items), and Vocabulary (10 items). In addition there is a Writing portion that addresses the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage.

The test was organized according to the following domains: Listening, Study Skills, Language Structure, Vocabulary, and Reading. Listening contained five items and the remainder of the domains contained ten items each.

The population includes all students enrolled in grade 7 who took an on-level test and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed well on this test with a system-wide average score on the items of 71%. Generally, students appear to be mastering the objectives in Literal Comprehension, Evaluative Comprehension, Vocabulary, Study Skills, and most of the items in Interpretive Comprehension. In this latter domain students are having difficulty with identifying key points and the writer's purpose in a given passage (item #'s 3 and 37).

The most deficits as a strand can be found in the Language Structure area. There are four items which fewer than fifty percent of the students answered correctly (item #'s 17, 18, 21, and 24). These items addressed identifying types of sentences, parts of speech, and complete subjects and predicates.



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DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

1985 - 1986

READING/LANGUAGE ARTS - LEVEL 7

LISTENING	skills Study	Language Structure	VOCABULARY	RBADING
12345	6789012345	111122222226789012345	2 2 2 2 3 3 3 3 3 3 6 7 8 9 0 1 2 3 4 5	3 3 3 3 4 4 4 4 4 4 6 7 8 9 0 1 2 3 4 5
B.2 Main idea B.3 Details C.2 Identifying key points C.4 Infurring caure and effect relation. D.4 Point of view	J.1 J.1 J.7 J.7 J.3 J.3 J.3 J.3 J.3 J.3 J.3 J.3 J.3 J.3	<pre>K.1 K.3 K.3 K.3 K.5 Complete subjects & predicates K.5 K.6 Tenses</pre>	E.2 Synonyms E.2 Antonyms E.3 Word meanings E.5 Multiple meanings E.4 Mumonyms	B.4 Identixying the seq ence C.6 Writer's purpose C.7 Inferring unstated points C.8 Interpreting figurative language D.3 Pact/opinion B.3 Details C.1 Fiction/non-fiction C.1 Fiction/non-fiction C.2 Piction/non-fiction C.3 Predicting further outcome D.2 Predicting further outcome D.7 Identifying irrelevant information



971 RO LEVE 7 TECR5005 11/07/86
PERCENTAGE OF CURRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

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SCHL	ı	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	4 G	41	42	43	44	45	IUIAL
21 30	52	96	58	93	68	91	92	82	82	57	73	82	82	96	88	53	15	32	60	75	35	52	47	46	67	67	73	66	71	71	86	77	86	67	80	68	51	83	84	57	72	71	68	72	55	69
2170																																														
4570																																														
20 60	35	86	46	75	53	86	82	80	66	66	55	71	73	93	86	31	22	42	51	75	33	53	31	48	71	80	80	48	55	64	62	71	73	75	75	46	37	64	64	37	73	60	64	57	55	61
20 70																																														
2240																																														
015A	55	95	53	92	67	88	90	85	77	71	69	78	74	97	88	61	27	47	66	78	37	63	58	49	73	75	86	60	67	75	79	71	84	70	78	68	59	80	85	62	81	80	69	71	57	71
2110	54	97	61	95	63	90	93	88	93	68	79	90	75	95	84	47	6	36	84	79	54	72	40	59	77	86	93	63	72	84	88	81	77	75	84	86	68	75	84	70	75	84	72	77	72	74
21 20																																														
2140																																														
2200	67	95	70	92	66	90	88	92	85	78	66	84	78	98	95	63	23	46	77	83	38	56	50	47	78	91	94	56	70	88	78	83	87	70	80	71	52	80	85	66	77	83	64	73	56	74
2950																																														
0158	64	94	64	92	65	88	92	85	80	78	66	75	68	96	86	63	23	47	72	82	46	64	53	46	79	85	90	60	68	82	78	76	85	74	77	73	60	78	88	63	78	76	68	70	57	12
20 30	60	92	53	92	59	89	87	81	66	68	62	70	65	95	87	60	35	52	64	70	37	65	55	49	72	77	90	59	65	69	78	61	77	74	84	65	52	73	83	55	71	72	66	68	44	48
2080																																														
2180																																														
2090																																														
2190																																														
2260																																														
0150	62	94	54	93	67	89	87	85	72	73	64	75	69	97	89	59	20	42	66	75	37	65	49	47	74	76	90	53	61	74	90	69	81	73	81	68	52	76	85	62	79	79	68	74	52	7 0
23 10	56	94	50	91	69	43	91	91	82	76	76	85	75	98	86	7o	40	59	69	76	41	71	48	55	76	73	85	61	58	71	81	77	89	76	84	78	62	85	88	63	79	81	69	73	63	74
2040																																														
20 50	62	96	67	95	72	90	94	87	75	74	71	77	70	**	88	56	20	48	56	84	36	58	49	49	78	79	92	65	76	8.8	82	75	87	75	84	76	54	81	86	75	70	77	68	68	49	72
0150	63	94	57	91	72	91	93	87	78	72	69	78	70	y 8	87	60	27	47	61	79	37	62	47	50	74	76	89	58	63	79	82	72	88	7',	85	75	55	80	86	46	73	77	67	70	54	71
1240	46	98	71	91	83	93	89	89	94	88	62	81	76	94	92	63	38	53	73	84	58	78	61	47	84	89	90	72	82	81	82	77	88	88	86	78	73	89	88	68	R4	78	72	79	55	7 7
2100																																														
2270	50	77	45	80	65	87	87	87	67	67	62	70	61	97	83	56	10	51	54	67	27	57	62	48	70	74	79	55	56	73	78	69	78	63	80	62	40	74	79	55	61	76	61	57	46	65
2980																																														
015E	53	88	54	87	71	89	86	86	77	76	59	73	65	94	84	59	22	42	62	74	39	64	53	46	73	76	83	59	65	75	75	72	84	74	76	68	58	79	82	6 Î	72	73	65	66	46	64
015A																																														
01 5 B	64	94	64	92	65	88	92	85	10	78	66	75	68	96	56	63	23	47	72	82	46	64	53	46	79	85	90	60	-8	8 2	78	76	85	74	77	73	60	76	88	63	78	76	68	70	57	72
015C																																														
0150																																														
015E																																														
5101	60	93	56	91	68	89	84	85	76	14	63	76	64	96	87	6 I	25	45	66	77	39	64	52	48	75	17	88	>8	64	76	79	7 Z	84	73	79	10	76	18	85	63	77	77	67	7 1	5 3	71



READING/LANGUAGE ARTS - LEVEL 8

INSTRUMENT AND POPULATION DESCRIPTION:

This is a fifty-five item multiple choice test developed by the State Department of Education and mandated for grade 8 students. Since it broadly correlates with the curriculum objectives and in the interest of limiting testing, the instrument serves as both the final exam for grade 8 students and the State Basic Skills Test.

The population includes all grade 8 students who were eligible to take the Basic Skills test in Reading.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed fairly well on this test with a system-wide average score of 71%. Since the test was developed outside the system, the test is not divided into domains as is the case with the locally developed tests; however, for analysis individual items were categorized into the following broad categories: Basic Word Meaning, Literal, Interpretive, and Evaluative Comprehension. Generally, students appear to have mastered the items that could be described as being in the domain of Literal Comprehension and most of the items within the other domains. However, there are isolated objectives which are not being mastered by more than fifty percent of the students. With Basic Word Meaning students are having difficulty with determining the meaning of words within sentences (item # 5). In Evaluative Comprehension the difficulty lies with the item that taps determining the writer's purpose (item # 6). In Interpretive Comprehension students are not mastering drawing implied conclusions.

These data suggest that although students have obtained mastery of basic skills in many areas, there are selected deficits

in each of the domains.



-45-

BASIC SKILLS TEST - FORM 7

2

2 3	Identify meaning of commonly used wds. within sentence, no clues to meaning of the word are giv'n	123
Identify meaning of written phrase, clause, sentence or paragraph Identify writer's purpose in a parag. or passage written to inform Demonstrate the ability to follow directions	sentence or paragraph sage written to inform	4567
Identify a statement as fact or opinion Recognize sequence of events or ideas in a written passage Draw conclusions implied in a paragraph or passage Identify the main idea, supporting details, & conclusion of a paragraph Predict an outcome implied in a paragraph or passage Draw conclusions implied in a paragraph or passage Identify cause/effect relationship implied in a paragraph or passage Identify writer's purpose in a parag. or passage written to persuade Identify meaning of word within a sentence that provides clues to the meaning of the word	5	111111111112

paragraph he meaning of a written phrase, clause, sentence or paragraph statement as fact or opinion Identify meaning of a written phrase, clause, sentence or paragraph Identify writer's purpose in a paragraph or passage written to inform a paragraph or pessage sentence or paragraph conclusion of the main idea, supporting details, and cause/effect relationship implied in a main idea, a book parts of 돢 Identify Identify Identify Identify Identify Identify Identify Identify Use the

identify cause/effect relationship implied in a paragraph or passage Recognize the sequence of events or ideas in a written passage Identify a statement as fact or opinion Draw conclusions implied in a paragraph or passage cause/effect relationship implied Sources Locate information in a variety of Identify

a paragraph Identify cause/effect relationship implied in a paragraph or passage and conclusion of Draw conclusions implied in a paragraph or passage Identify the main idea, supporting details, and cor

paragraph ~ Identify a statement as fact or opinion Identify main idea, supporting details, and conclusion of Demonstrate the ability to follow directions Predict an outcome implied in a paragraph or passage

clause, sentence or paragraph passage in a paragraph Identify the meaning of a written phrase, clause, sente Draw conclusions implied in a paragraph or passage Recognize the sequence of events or ideas in a written Identify main idea, supporting details, and conclusion Identify information on a chart, map or graph

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-91-

981 RD LEVE 8 TECK5005 11707786
PERCENTAGE OF CURRECT ANSWERS PER LIEM
NUTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY

1 2 3 4 > 6 7 8 9 10 11 12 13 14 1> 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 36 7 8 9 60 SCHL 2130 78 44 81 85 27 17 51 93 58 55 46 20 66 1 79 72 72 44 40 78 89 79 60 62 67 76 76 59 69 89 56 76 71 81 68 97 94 97 72 29 2170 67 51 76 76 26 37 57 95 68 53 51 26 68 83 84 73 71 54 30 73 78 83 64 61 60 66 72 59 64 90 54 76 66 74 69 95 89 97 72 30 4570 91 52 73 86 39 26 69 ** 69 52 60 30 56 78 69 52 69 43 39 65 56 56 60 65 60 73 64 56 50 78 56 86 65 52 78 82 95 91 73 47 2060 68 44 94 97 15 18 57 92 65 44 60 42 76 84 86 81 84 26 42 81 84 81 65 65 50 78 81 76 68 89 57 81 60 73 78 97 94 ** 84 31 2070 80 65 77 79 35 30 72 90 72 60 54 39 57 68 75 63 70 49 43 75 82 78 61 54 56 69 60 60 70 86 59 77 57 74 63 90 85 87 62 18 2240 71 49 83 81 32 37 34 86 60 64 56 28 50 77 84 67 83 56 45 73 88 77 66 67 60 73 67 66 71 88 37 83 58 79 83 96 92 48 75 33 DISA 75 54 19 81 29 24 61 42 67 56 53 31 63 77 80 68 73 49 39 75 82 79 62 60 59 71 68 61 68 88 55 78 62 75 69 93 90 94 70 27 2110 79 51 81 89 20 22 59 8) 63 59 67 34 73 89 97 79 87 48 46 79 95 83 65 65 65 81 75 75 67 81 63 83 61 77 07 93 93 97 71 38 2120 60 48 71 88 26 41 56 ** 71 56 58 33 75 86 83 80 84 45 40 78 85 90 63 71 65 78 76 75 68 91 60 85 75 73 75 95 93 98 73 35 2140 82 60 80 92 52 42 76 98 75 66 69 44 71 88 88 82 82 49 65 80 85 87 75 68 66 73 71 68 65 91 62 81 70 76 67 90 91 89 66 35 2200 85 67 83 91 32 52 79 98 76 57 56 48 70 83 86 81 84 57 62 87 93 89 70 68 58 76 81 81 74 89 75 91 82 75 85 98 97 ** 67 29 2950 86 62 81 90 4. 71 48 90 78 66 63 30 67 90 90 79 87 50 56 81 90 89 65 61 62 81 17 78 77 95 78 85 75 78 68 90 94 90 81 19 DISO 81 60 81 91 38 40 64 95 74 62 63 38 70 87 89 80 84 50 57 81 89 88 66 63 77 76 75 71 91 69 85 73 76 72 93 94 94 72 29 2030 73 54 67 87 25 22 48 94 62 54 53 30 68 82 83 70 77 43 40 68 84 80 58 63 54 76 67 70 69 88 51 82 69 71 71 94 90 94 63 27 2080 72 40 77 80 16 31 41 88 57 35 57 20 54 72 66 67 77 32 36 53 77 75 51 63 38 66 59 58 54 88 53 71 61 62 62 88 89 89 75 22 21 d0 66 48 73 84 24 29 61 91 64 38 49 34 67 84 78 70 76 36 36 70 78 74 52 62 36 68 71 68 56 90 59 76 69 66 64 87 86 d6 60 32 2040 72 58 66 40 26 24 70 97 73 59 63 25 61 87 83 75 82 43 46 75 83 80 62 73 49 72 75 59 54 87 58 85 70 75 62 97 83 97 66 29 2190 91 59 72 82 27 36 54 90 61 54 47 29 60 72 70 06 72 40 36 61 78 75 55 57 64 66 59 58 63 84 54 56 64 64 69 93 87 90 60 23 2260 67 36 73 92 17 25 48 ** 63 32 36 36 61 92 90 71 80 28 23 69 80 80 63 71 32 75 73 51 65 90 46 73 69 73 69 94 88 98 67 28 015C 74 51 71 85 24 27 55 93 63 48 52 29 63 81 78 70 77 39 38 67 60 71 57 64 48 71 67 63 62 88 54 76 67 68 67 92 86 92 64 27 2010 83 52 79 81 39 27 54 95 70 47 55 31 66 79 81 76 81 42 49 74 79 82 57 62 41 76 66 64 64 87 52 78 74 69 69 97 95 97 73 30 2340 70 45 76 83 34 28 56 92 50 47 45 50 68 85 84 70 71 44 45 68 85 83 55 50 50 75 79 60 62 86 64 84 63 63 74 90 92 91 70 29 2050 77 64 81 86 35 26 55 42 78 69 56 27 75 83 87 76 72 49 51 78 92 86 67 62 64 75 80 60 71 89 61 81 67 75 76 95 95 97 75 32 DISO 77 55 79 84 36 27 55 93 70 56 53 34 70 82 84 76 75 46 49 74 86 84 60 60 52 75 75 61 67 88 59 81 69 70 73 94 94 95 73 30 1010 95 88 97 98 68 56 84 98 92 86 85 40 83 97 98 97 91 75 85 98 97 97 94 89 82 85 85 86 86 98 80 92 83 93 82 95 97 97 93 00 1020 85 72 92 97 51 45 71 47 85 74 73 38 71 45 46 96 87 59 77 90 46 95 87 86 67 82 85 83 78 95 69 94 71 84 79 96 97 98 93 49 1240 79 53 76 83 34 27 52 94 00 47 52 31 61 72 74 66 72 46 37 72 85 84 64 64 52 62 65 64 57 86 54 75 62 65 62 89 84 88 64 25 75 48 68 79 25 36 54 67 62 47 43 25 62 75 70 62 67 40 42 62 79 81 66 60 57 62 63 56 61 77 58 74 58 57 59 83 87 89 65 24 70 43 70 69 22 13 54 90 61 31 45 27 51 73 75 58 68 45 36 62 73 80 58 63 43 68 62 62 65 88 40 75 61 63 63 94 86 90 58 11 2980 79 57 85 91 34 44 71 95 76 50 57 38 58 91 88 77 85 47 53 80 84 83 55 75 64 65 69 69 73 95 65 79 65 76 77 94 90 97 79 32 DISE 86 70 87 91 49 43 70 95 60 67 68 36 71 89 89 85 83 59 66 85 91 91 80 79 67 76 77 76 75 93 67 36 72 80 75 93 93 95 83 43 DISA 75 54 79 81 29 29 61 92 67 56 53 31 63 77 80 68 73 48 39 75 82 79 62 60 59 71 68 61 68 88 55 78 62 75 69 93 90 94 70 27 UISB 81 60 81 91 38 40 64 95 74 62 63 38 70 87 89 80 84 50 57 81 89 88 68 66 63 77 76 75 71 31 69 85 73 76 72 93 94 94 72 29 74 51 71 85 24 27 55 93 63 48 52 29 63 81 78 70 71 39 38 67 80 17 57 64 48 71 67 63 62 88 54 76 67 68 67 92 88 92 64 27 DISD 77 55 79 84 36 27 55 93 70 56 53 34 70 82 84 76 75 46 49 74 86 84 60 60 52 75 75 61 67 88 59 81 69 70 73 94 94 95 73 30 DISE 86 70 87 91 49 43 70 45 60 67 68 36 71 39 89 85 83 59 66 85 91 91 80 79 67 76 77 76 75 93 67 86 72 80 75 93 93 95 83 43 STOT 79 60 80 87 37 35 62 94 72 59 59 34 67 84 84 77 79 50 52 77 86 85 68 68 59 74 73 69 69 90 61 82 69 75 71 93 92 94 74 33



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HIGH SCHOOL ENGLISH



ENGLISH - BASIC

INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of thirty-five multiple choice items measuring selected objectives in the curriculum strands of Literal, Interpretive, and Evaluative Comprehension, and Vocabulary. In addition there is a writing portion that addresses the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage.

So that the test may be content valid for each high school, yet at the same time provide a measure of student performance system-wide, the test contains both school-developed and centrally-developed portions. The test is organized so that items 1-15 are school-developed and tap literal and interpretive objectives, items 16-25 are school-developed and address Vocabulary objectives, and items 26-35 are centrally developed and measure interpretive comprehension objectives (5 items), and evaluative comprehension objectives (5 items). Since the school-developed items vary from school to school, only the centrally-developed items will be analyzed.

The population includes all high school students (with the exception of the exam schools) who took a Basic English course and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 53%. Of the five items measuring evaluative comprehension, there were two which fewer than fifty percent of the students answered correctly. Students are having difficulty comparing two views of the same issue (item # 26), and identifying related and unrelated supporting details (item # 3°). Of the five items measuring interpretive comprehension there were four which fewer than fifty percent of the students answered correctly. Students are having difficulty with fact and opinion (item # 30) and with figurative language (item #'s 33, 34, and 35).



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DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

1985 - 1986

ENGLISH	-	BASIC

PART I	PART II	PART III
1 - 15	16 - 25	2 2 2 2 3 3 3 3 3 3 3 6 7 8 9 0 1 2 3 4 5
School-developed portion- objectives drawn from categories B and C of High School Curriculum Objectives	School-developed portion- objectives drawn from category E of High School Curriculum Objectives	D.4 Comparing two views—of same issue D.2 Evaluating written material D.5 Distinguishing bet. clear & unclear mat. C.14 Fact/opinion D.6 Related/unrelated supporting details C.10 Figurative language C.10 C.10



PERCENTAGE OF CURRECT ANSWERS PER ITEM NOTE 100 PERCENT UN A PARTICULAR ITEM IS INDICATED BY ** SCHL 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 TUTAL 69 66 72 46 24 69 69 52 58 49 44 58 67 75 58 55 44 81 55 40 66 67 42 60 50 50 75 58 72 40 44 60 23 38 27 55 6! 73 67 72 69 77 63 46 68 75 47 65 81 73 56 40 32 67 40 68 5 81 81 89 90 50 56 52 63 42 27 55 44 43 28 60 1110 65 70 69 60 48 73 65 48 63 63 66 62 75 74 57 47 38 73 47 55 60 75 62 75 72 50 65 55 67 41 35 57 34 41 28 58 1250 50 75 12 75 25 25 87 12 37 25 62 43 50 43 25 31 12 6 25 25 6 18 6 0 0 12 18 62 37 43 37 50 18 31 18 31 79 74 67 81 91 77 46 77 65 72 56 37 82 5 51 48 89 50 51 81 50 62 44 39 67 67 81 41 77 44 50 41 31 31 27 58 1100 72 74 55 79 77 66 55 63 59 62 58 39 75 13 45 44 72 40 45 68 40 52 36 31 52 55 67 45 68 44 47 43 28 31 25 52 DI SB 1060 72 70 84 96 86 76 66 72 86 78 49 66 64 64 64 66 45 76 70 29 68 84 18 45 68 54 68 43 56 47 23 60 45 39 3 62 11 20 54 58 25 29 37 37 41 33 37 37 33 41 54 62 54 37 66 54 33 62 50 50 25 70 54 54 50 50 70 41 41 50 16 29 12 44 2030 32 75 67 75 46 46 71 85 64 64 78 42 75 35 67 57 46 75 78 75 96 85 ** 78 89 50 67 46 64 50 35 57 32 28 17 61 1160 56 68 66 75 63 58 61 65 69 65 52 53 65 56 63 56 50 70 64 4 71 76 71 59 70 53 64 45 61 46 30 57 35 33 9 57 DISC 1350 46 66 36 47 30 36 73 32 43 79 53 42 40 53 46 53 56 33 52 22 40 60 57 58 57 35 49 63 56 36 29 39 29 40 23 46 27 77 13 80 19 30 78 27 34 68 57 28 63 74 28 36 21 30 31 19 19 28 22 37 39 24 21 45 21 27 25 30 30 65 24 37 1070 DISD 40 70 28 58 27 34 75 30 40 75 54 37 48 60 40 47 44 32 45 21 33 49 45 51 51 31 39 57 44 33 .8 36 29 48 23 43 1380 73 72 75 70 82 48 70 77 84 47 76 79 53 73 62 60 86 76 56 57 79 55 80 29 33 58 59 48 68 52 31 63 44 36 35 61 62 43 62 50 62 50 75 62 62 62 75 93 81 81 75 62 62 56 62 62 68 81 56 75 62 56 50 56 68 50 12 50 31 25 62 60 1210 74 44 56 4P 05 82 48 51 74 60 36 70 46 60 43 50 51 75 55 55 48 70 25 53 32 63 67 44 56 58 34 65 37 27 27 53 1240 72 61 63 62 75 58 64 08 79 52 64 77 53 70 57 57 73 74 57 57 68 62 61 40 35 60 61 47 65 54 30 63 38 32 35 59 DISE DISA 65 70 69 60 48 73 65 48 63 63 46 62 75 74 57 47 38 73 47 55 60 75 62 75 72 50 65 55 67 41 35 57 34 41 28 58 72 74 55 79 77 66 55 63 59 62 58 39 75 13 45 44 72 40 45 68 40 52 36 31 52 55 67 45 68 44 47 43 28 31 25 52 DISB 56 68 66 75 63 58 61 66 69 65 52 53 65 56 63 56 50 70 34 49 71 76 71 59 70 53 64 45 61 46 30 57 35 33 9 57 DISC 40 70 28 58 27 34 75 30 40 75 54 37 48 60 40 47 44 32 45 21 33 49 45 51 51 31 39 57 44 33 28 36 29 48 23 43 DISD 72 61 68 62 75 58 64 68 79 52 64 77 53 70 5? 57 73 74 57 57 68 62 61 40 35 60 61 47 65 54 30 63 38 32 35 59 DISE 59 68 56 64 55 55 66 53 61 63 55 56 60 60 52 51 55 58 51 46 54 62 56 52 54 48 57 51 59 43 32 51 33 38 25 53 STOT

11/07/85



991 BAS ENG

TECK5005

ENGLISH - GENERAL

INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of forty multiple choice items measuring selected objectives in the curriculum strands of Literal, Interpretive, and Evaluative Comprehension, and Vocabulary. In addition there is a writing portion that addresses the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage.

So that the test may be content valid for each high school, yet at the same time provide a measure of student performance system-wide, the test contains both school-developed and centrally-developed portions. The test is organized so that items 1-17 are school-developed and tap literal and interpretive objectives, items 18-27 are school-developed and address Vocabulary objectives, and items 28-40 are centrally developed and measure literal comprehension objectives (2 items), interpretive comprehension objectives (8 items), and evaluative comprehension objectives (3 items). Since the school-developed items vary from school to school, only the centrally-developed items will be analyzed.

The population includes all high school students (with the exception of the exam schools) who took a General English course and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 59%. Of the thirteen centrally-developed items there were nine which fewer than fifty percent of the students answered correctly. In literal comprehension students had difficulty with identifying types of logical order (item; #'s 33 and 34). In interpretive comprehension students had difficulty with identifying points of view, writer's purpose, and figurative language (item #'s 29, 30, 38, and 39). In evaluative comprehension students have not mastered evaluating written material and distinguishing between related and unrelated ideas.



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DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

1985 - 1986

ENGLISH - GENERAL

PART I	PART II	PART III
1 - 17	18 - 27	2 2 3 3 3 3 3 3 3 3 3 3 4 8 9 0 1 2 3 4 5 6 7 8 9 0
School-developed portion - objectives draw: from categories B and C of High School Curriculum Objectives	School-developed portion - objectives drawn from category E of High School Jurriculum Objectives	D.2 Evaluating written material C.13 Identifying points of view in fiction C.3 Writer's purpose D.6 Related/unrelated supporting details D.6 B.4 Types of logical order C.4 Fact/opinion C.10 Figurative language C.10 C.10 C.10

992 GEN 1NG TECR5005 11/07/86
PERCENTAGE OF CUFRECT ANSWERS PER LIEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 . 32 33 34 35 36 38 39 40 TOTAL SCHL 1040 79 79 61 84 69 76 64 87 74 76 66 76 92 71 87 64 82 64 6. 43 74 76 84 76 79 58 25 48 38 30 38 33 43 71 38 35 35 41 65 1110 83 62 27 87 89 85 56 45 79 62 70 68 50 83 50 68 64 77 52 52 54 58 72 68 75 68 93 41 39 56 39 18 45 43 64 64 77 22 35 52 60 OISA 81 70 42 86 80 81 59 64 71 68 68 72 68 78 66 66 72 71 59 68 63 65 19 72 79 72 87 49 33 52 39 24 42 39 55 67 59 28 35 47 62 1250 79 72 46 94 79 74 51 81 63 46 76 80 66 74 61 48 35 /1 46 46 85 72 94 96 83 36 38 46 36 37 45 38 54 31 62 53 51 27 22 48 59 1100 73 44 84 76 81 89 50 55 89 60 81 81 34 44 28 52 15 26 92 36 50 52 78 60 84 57 23 39 47 42 47 42 44 34 76 55 57 50 26 44 55 0156 77 63 59 88 80 79 51 73 72 51 78 90 55 64 50 49 28 56 61 43 73 66 89 84 83 43 33 44 40 39 46 40 51 32 66 53 53 34 23 46 57 1360 67 52 65 60 72 60 47 65 85 62 57 42 60 45 37 47 45 35 45 62 25 55 45 62 37 27 42 52 57 45 55 40 42 50 72 77 75 60 52 57 53 1120 67 46 53 7) 57 57 60 17 60 67 35 75 57 71 64 71 57 71 71 57 35 64 50 39 32 42 53 53 42 50 50 32 60 35 53 60 39 17 14 57 51 1160 76 58 72 78 69 64 76 61 47 93 83 76 61 68 26 30 86 64 87 69 47 72 50 43 79 46 90 54 38 34 41 45 49 31 72 69 72 45 32 71 61 DISC 72 54 66 71 68 61 65 53 60 79 66 66 60 62 36 43 68 57 72 65 39 65 48 48 58 40 69 53 44 40 46 41 49 37 68 70 66 43 34 64 57 1050 88 84 96 84 73 ** 84 65 80 65 76 57 61 65 80 69 73 61 73 38 80 61 92 57 80 69 61 61 46 53 34 61 50 65 65 69 57 69 11 76 67 DISD 88 84 96 84 73 ** 84 65 80 65 76 57 61 65 80 69 73 61 73 38 80 61 92 57 80 69 61 61 46 53 34 61 50 65 65 69 57 69 11 76 67 1080 61 9 74 83 52 60 44 66 23 43 30 42 46 26 84 70 77 79 78 38 85 90 84 82 90 35 50 61 54 45 41 32 38 43 72 62 69 45 27 59 50 1210 84 73 84 82 70 89 73 80 71 70 64 47 73 89 64 66 75 78 65 77 84 82 80 73 75 68 80 31 57 35 47 36 40 52 57 52 61 43 43 57 66 1240 70 82 50 61 77 76 97 81 63 65 76 61 91 36 67 65 61 66 37 61 50 87 65 31 62 80 82 43 42 53 31 40 31 48 73 67 50 35 26 60 60 DISE 69 49 68 75 65 72 69 75 48 57 54 50 68 44 74 67 71 75 66 55 73 87 77 63 77 58 68 48 51 45 39 36 36 47 69 61 61 41 30 59 60 OISA 81 70 42 86 80 81 59 64 77 68 68 72 68 78 66 66 72 71 59 68 63 65 79 72 79 72 87 49 33 52 39 24 42 39 55 67 59 28 35 47 62 DISB 77 63 59 88 80 79 51 73 72 51 78 80 55 64 50 44 28 56 61 43 73 66 89 84 83 43 33 44 40 39 46 40 51 32 66 53 53 34 23 46 57 DISC 72 54 66 71 68 61 65 53 60 79 66 66 60 62 36 43 68 57 72 65 39 65 48 48 58 40 69 53 44 40 46 41 49 37 68 70 66 43 34 64 57 OISO 88 84 96 84 73 ** 84 65 80 65 76 57 61 65 80 69 73 61 73 38 80 61 92 57 80 69 61 61 46 53 34 1 50 05 65 69 57 69 11 76 67 DISE 69 49 68 75 65 72 69 75 48 57 54 50 68 44 74 67 71 75 66 55 73 87 77 63 77 58 68 48 51 45 39 36 36 47 69 61 61 41 30 59 60 STOT 74 57 63 79 71 73 64 67 61 63 64 63 63 58 60 58 62 66 66 56 64 74 73 64 74 53 64 49 44 44 42 37 43 41 66 63 60 40 30 57 59



ENGLISH - SECONDARY I

INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of forty-five multiple choice items measuring selected objectives in the curriculum strands of Literal, Interpretive, and Evaluative Comprehension and Vocabulary. In addition there is a writing portion that addresses the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage.

So that the test may be content valid for each high school, yet at the same time provide a measure of student performance system-wide, the test contains both school-developed and centrally-developed portions. The test is organized so that items 1-20 are school-developed and tap literal and interpretive objectives, items 21-29 are school-developed and address Vocabulary objectives, and items 30-45 are centrally-developed and measure literal comprehension objectives (2 items), interpretive comprehension objectives (7 items), and evaluative comprehension objectives (7 items). Since the school-developed items vary from school to school, only the centrally-developed items will be analyzed.

The population includes all high school students (with the exception of the exam schools) who took a Secondary I English course and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 58%. Of the sixteen centrally-developed items there are nine which fewer than fifty percent of the students answered correctly. In literal comprehension students had difficulty with types of logical order (item #'s 30 and 31). In interpretive comprehension students were unclear to evaluating written material, distinguishing between clear and unclear material, and identifying a writer's bias or prejudice (items # s 32, 33, and 36). In evaluative comprehension students are not mastering the items related to fact/opinion (item # 40) and figurative language (item #'s 42, 43, and 44).



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DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM' REFERENCED FINAL

ENGLISH - SECONDARY I

1985 - 1986

PART I	PART II	PART III
1 - 20	21 - 29	3 3 3 3 3 3 3 3 3 3 4 4 4 4 4 4 6 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5
School-developed portion - objectives drawn from categories B and C of High School Curriculum Objectives	School-developed purtion - objectives drawn from category E of High School Curriculum Objectives Grade 9	B.4 Types of logical order D.2. Evaluating written material D.5 Disting, bet. clear & uncl.ar material D.6 Disting, bet. related & unrel. details: D.2 Evaluating written material D.3 Writer's bias or prejudice C.13 Identifying points of view D.7 Propaganda techniques D.8 Kinds of steroetyping C.14 Fact/opinion C.10 C.10 C.10 C.10 C.10



993 SEC ENG I 7ECR5005 11/07/86 PERLENTAGE OF CORRECT ANSWERS PER ITEM NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY ** 1 2 3 4 5 6 7 8 9 10 11 12 13 1+ 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 TOTAL SCHL 80 63 70 67 13 79 70 70 75 76 70 79 69 84 52 82 67 68 79 70 79 62 67 69 73 73 76 79 73 31 29 26 51 51 62 35 60 82 50 43 67 47 50 37 70 64 72 67 80 46 92 27 F1 73 56 91 70 92 55 43 57 51 36 26 58 65 41 51 91 88 95 38 56 87 85 51 28 45 42 60 65 43 80 76 55 56 86 55 50 41 72 61 1110 76 65 75 56 82 53 75 72 66 83 70 85 62 64 54 67 51 47 69 67 60 56 79 79 83 56 66 83 79 41 29 35 46 55 63 39 70 79 52 50 76 51 50 39 71 63 71 75 53 70 48 69 54 55 25 47 55 59 44 58 60 46 58 40 53 64 69 65 47 68 68 71 73 56 52 43 33 34 41 68 59 42 76 85 58 33 75 56 42 34 71 56 90 61 88 70 94 62 57 86 54 73 88 92 84 85 37 64 80 72 77 52 64 20 50 40 70 33 65 85 50 41 40 36 45 46 62 45 77 81 49 52 77 60 72 49 73 64 1100 76 72 62 70 60 68 55 63 32 54 63 67 54 65 54 51 63 48 59 61 68 54 48 60 69 61 71 63 51 42 35 34 42 63 60 43 76 84 61 38 76 57 49 38 71 58 DISB 69 67 58 23 56 63 73 69 58 54 50 7; 58 67 60 8 56 54 73 54 43 54 47 56 69 45 65 65 76 28 32 34 45 54 52 52 60 76 36 34 60 50 34 26 65 51 74 96 81 74 81 70 77 37 77 81 74 62 77 88 81 77 96 85 77 22 48 51 51 33 88 66 77 29 88 51 7 18 48 44 66 33 85 88 37 22 81 44 44 40 67 62 1120 56 75 76 59 46 56 71 60 59 78 63 75 60 65 56 71 66 71 54 60 51 63 59 91 54 64 88 61 32 54 43 45 50 66 72 41 81 88 54 48 81 48 38 44 85 62 62 76 72 52 54 60 73 59 61 72 61 72 62 69 61 5, 68 69 63 52 48 59 54 73 63 59 80 57 53 46 35 38 48 59 66 43 76 85 46 40 76 48 38 39 76 59 DISC 30 42 78 51 66 78 54 78 15 66 45 51 30 30 66 63 54 42 66 54 45 90 87 21 21 39 78 57 27 51 30 33 39 66 78 27 66 84 36 30 75 36 51 42 78 52 28 86 85 95 60 47 69 72 74 47 77 75 77 67 61 81 75 62 44 20 52 59 47 25 29 71 49 24 39 44 32 32 50 44 65 43 80 86 63 47 83 48 27 41 71 57 28 79 84 88 61 52 67 73 65 50 72 71 69 61 62 78 71 59 47 32 51 64 54 24 28 66 54 29 37 45 31 32 48 65 67 41 78 85 59 44 82 46 30 41 72 57 DLSU 79 76 23 91 91 74 91 37 65 38 86 57 72 39 70 64 80 62 93 66 75 71 70 80 80 46 51 34 18 42 28 29 50 45 72 40 79 83 42 41 81 53 45 38 74 61 47 41 58 70 64 65 37 84 45 56 8 20 81 80 32 40 21 48 74 36 32 79 80 50 35 28 43 46 43 30 29 37 37 54 62 30 79 78 52 31 64 32 26 21 69 49 80 69 84 60 17 64 85 79 69 69 38 19 23 53 73 53 64 51 37 45 53 72 75 70 55 50 21 27 45 42 31 37 38 62 60 47 82 89 53 36 75 34 28 29 65 53 3n 76 7 40 79 74 58 65 70 61 56 56 49 55 58 63 71 62 66 58 66 72 80 88 65 83 51 73 73 43 33 31 34 58 58 29 71 80 38 39 71 36 36 28 64 58 1210 53 37 52 79 47 69 23 37 40 18 21 44 44 26 76 22 53 34 43 53 54 38 17 62 53 50 68 89 87 43 29 39 44 67 61 35 79 82 45 51 82 72 50 32 79 50 1240 59 64 52 67 66 71 63 58 60 49 50 44 55 50 55 52 63 54 66 5 60 68 68 74 61 55 48 54 52 41 30 33 41 61 64 36 77 82 50 40 75 45 38 31 70 56 DLSE DISA TO 65 75 56 82 53 75 72 66 83 79 85 62 64 54 67 51 47 C9 67 60 56 79 79 83 56 66 83 79 41 29 35 46 55 63 39 70 79 \$2 50 76 51 50 39 71 63 76 72 62 70 60 68 55 63 32 54 63 67 54 65 54 51 63 48 59 61 68 54 48 60 69 61 71 63 51 42 35 34 42 43 40 43 76 84 41 38 76 57 49 38 71 58 DISC 62 76 72 52 54 60 73 59 61 72 61 72 62 69 61 55 68 69 63 52 48 59 54 73 63 59 80 57 53 46 35 38 48 59 64 43 76 85 46 40 76 48 38 39 76 59 28 79 84 88 61 52 67 73 65 50 72 71 69 61 62 78 71 59 47 32 51 64 54 24 28 66 54 29 37 45 31 32 48 65 67 41 70 85 59 44 82 46 30 41 72 57 59 64 52 67 66 71 63 58 60 49 50 44 55 50 55 52 63 54 66 54 60 68 68 74 61 55 48 54 52 41 30 33 41 41 44 36 77 82 50 40 75 45 38 31 70 56 60 70 64 68 64 64 64 63 56 57 60 61 59 58 56 58 63 54 62 54 59 62 61 64 61 58 60 56 53 42 32 34 44 61 64 39 76 83 53 41 76 49 41 36 71 58



ENGLISH - SECONDARY II

INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of forty-five multiple choice items measuring selected objectives in the curriculum strands of Literal, Interpretive, and Evaluative Comprehension, and Vocabulary. In addition, there is a writing portion that addresses the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage.

So that the test may be content valid for each high school, yet at the same time provide a measure of student performance system-wide, the test contains both school-developed and centrally-developed portions. The test is organized so that items 1-20 are school-developed and tap literal and interpretive objectives, items 21-30 are school-developed and address Vocabulary objectives, and items 31-45 are centrally-developed and measure literal comprehension objectives (2 items), interpretive comprehension objectives (7 items), and evaluative comprehension objectives (6 items). Since the school-developed items vary from school to school, only the centrally-developed items will be analyzed.

The population includes all high school students (with the exception of the exam schools) who took a Secondary II English course and for whom valid answer sheets were turned in.

SYSTEM SILENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 61%. Of the fifteen centrally-developed items there were seven which fewer than fifty percent of the students answered correctly. In literal comprehension students had difficulty with types of logical order (item #'s 31 and 32). In evaluative comprehension students were unable to identify a writer's bias or prejudice (item # 35). In interpretive comprehension students had difficulty with fact/opinion (item # 41) and with figurative language (item #'s 42, 44, and 45).



DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

1985 - 1986

ENGLISH - SECONDARY II

PART I	PART II	PART III
1 - 20	21 - 30	3 3 3 3 3 ² 3 3 3 4 4 4 4 4 4 4 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5
School-developed portion - objectives drawn from Categories B and C of High School Curriculum Objectives	School-developed portion - objectives drawn from category E of High School Curriculum Objectives Grade 10	B.4 Types of logical order C.13. Identifying points of view D.2 Evaluating written material D.3 Writer's bias or prejudice D.6 Disting, bet. related & unrel. details D.7 Propaganda tuchniques D.8 Kinds of stereotyping C.14 Fact/opinion C.10 Figurative language C.10 C.10



99% SEC ENG II TECK5005 11/07/86
PERCENTAGE OF CORRECT ANSWERS PER 1 ILM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED "Y **

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ENGLISH - SECONDARY III

INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of fifty multiple choice items measuring selected objectives in the curriculum strands of Literal, Interpretive, and Evaluative Comprehension, and Vocabulary. In addition, there is a writing portion that addresses the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage.

So that the test may be content valid for each high school, yet at the same time provide a measure of student performance system-wide, the test contains both school-developed and centrally-developed portions. The test is organized so that items 1-20 are school-developed and tap literal and interpretive objectives, items 21-30 are school-developed and address vocabulary objectives, and items 31-50 are centrally-developed and measure literal comprehension objectives (2 items), interpretive comprehension objectives (10 items), and evaluative comprehension objectives (8 items). Since the school-developed items vary from school to school, only the centrally-developed items will be analyzed.

The population includes all high school students (with the exception of the exam schools) who took a Secondary III English course and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 60%. Of the literal comprehension items students had difficulty with types of logical order (item # 31). Of the ten interpretive comprehension items there were six items which fewer than fifty percent of the students answered correctly. These items addressed fact/opinion (items #'s 38 and 39) and figurative language (item #'s 44, 46, 47, and 48).



DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

1985 - 1986

ENGLISH - SECONDARY ITT

PART I	PART II			-	-		_		_		PA	RT	1:	[]			-				
1 - 20	21 - 30	3 1	3 2	3 3	3 4	3 5	3 6	3 7	3 8	3 9	4 0	4	4 2	4 3	4	4 5	4	47	4 8	4 9	5 0
School-developed portion - objectives drawn from categories B and C of High School Curriculum Objectives	School-developed portion - objectives drawn from category E of High School Curriculum Objectives Grade 11		B.4 } Types of Logical Order	D.2 Evaluating written material	ar a		Evaluating written mat	C.13 Identifying points of view	C.14 Pact/Oninion	4 \ 1 ac c/ Opinito	D.7 Propaganda techniques	D.8 Kinds of stereotyping	D.7 } Propaganda techniques	· ·	C.10)	C.10 /) 0 [C.10 / Figurative language	C.10	0.10	C.10



PERCENTAGE OF CURRECT A'ISMERS PER LIER NOTE 100 PERCENT ON A PARTICULAR LIEM IS INDICATED BY .. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 4' 42 43 44 45 46 47 48 49 50 101AL 82 77 68 72 40 86 73 53 86 69 84 81 63 57 80 64 82 75 81 59 57 44 71 80 41 89 92 47 84 22 50 57 77 69 77 69 46 36 36 67 61 80 78 39 61 30 61 43 68 59 05 83 69 70 83 48 23 91 76 58 57 83 73 55 79 61 76 66 91 76 54 0 68 77 91 90 74 49 85 50 42 54 71 64 78 82 61 35 46 64 57 73 74 50 72 38 45 25 55 50 61 83 72 69 59 64 64 45 75 80 63 68 82 68 56 79 62 79 70 87 68 55 19 69 78 72 89 81 48 84 38 45 55 74 66 77 76 54 36 42 65 59 76 76 45 67 35 52 33 61 51 63 1110 86 68 72 45 66 68 78 57 61 42 78 31 71 59 40 65 51 35 41 65 68 75 69 67 68 37 63 45 61 67 45 54 73 59 72 77 64 24 36 67 62 65 62 52 62 33 46 35 61 48 5d 79 52 63 72 76 32 71 72 73 46 51 63 49 38 42 54 78 53 80 56 42 46 50 74 86 59 72 59 41 29 48 37 72 60 69 74 60 19 27 65 49 88 77 45 52 40 38 39 47 44 56 83 61 68 57 71 52 75 64 66 49 66 46 61 50 41 60 63 43 59 61 57 62 61 70 76 47 67 52 52 50 46 46 73 59 71 76 62 22 31 66 56 76 69 49 58 36 42 37 55 46 57 1100 21 31 78 36 36 84 31 63 47 57 15 26 63 36 36 21 21 31 63 21 10 26 10 21 15 26 10 57 42 36 52 47 31 63 52 52 47 42 57 52 36 42 15 21 5 21 31 5 10 10 35 87 91 83 45 64 67 74 87 79 82 66 53 43 69 54 72 58 37 41 46 72 66 48 43 66 61 75 33 72 62 37 45 75 59 62 77 64 27 25 53 51 66 54 35 58 38 37 37 61 37 53 95 40 85 72 47 70 57 87 90 67 65 67 72 67 47 77 65 60 85 57 62 72 75 70 72 75 40 72 82 75 47 60 72 90 87 90 62 20 22 77 75 75 87 57 60 45 52 45 70 67 60 1120 OISC 79 65 83 52 54 71 61 83 77 73 57 53 56 63 49 66 54 43 59 46 59 61 51 48 60 60 53 50 71 62 42 50 67 70 69 77 61 27 29 61 57 65 59 40 50 38 41 34 56 41 57 1350 78 76 64 54 86 43 63 45 68 59 76 70 73 45 40 64 76 56 80 53 64 76 71 54 54 69 39 64 55 72 52 39 69 71 68 75 54 23 28 54 57 74 67 47 52 40 47 44 58 59 51 1070 71 52 63 68 76 70 73 67 68 67 72 35 62 47 59 54 49 45 37 33 36 79 32 79 44 58 35 46 59 41 43 50 75 63 72 79 62 35 30 63 58 77 65 50 66 43 44 34 61 66 50 DISD 74 62 64 62 80 59 69 58 68 64 74 49 67 46 51 58 60 50 55 41 48 78 50 68 48 63 34 53 57 54 46 46 72 66 70 78 59 30 29 59 57 76 66 49 60 42 46 38 60 63 76 87 82 73 65 59 64 51 81 46 52 86 82 62 73 69 80 48 85 69 80 56 62 64 68 85 63 67 78 64 64 39 45 79 69 70 72 60 27 35 70 65 86 81 44 61 46 42 46 50 44 64 70 52 97 61 41 58 41 70 82 8 55 23 47 52 67 55 52 44 41 97 76 88 88 70 70 41 52 73 70 26 44 32 58 50 73 82 58 20 38 64 61 67 79 61 67 17 23 26 52 55 56 77 18 55 55 61 38 62 4 45 66 41 68 81 51 34 43 39 18 51 31 75 61 59 80 81 88 72 88 80 31 37 59 66 56 73 68 68 27 43 69 63 77 88 52 70 44 37 47 48 47 55 1190 61 78 55 83 71 78 48 65 71 64 63 57 48 64 51 67 44 39 73 58 64 69 54 57 36 76 73 64 63 58 44 53 69 61 47 66 55 51 57 65 48 72 34 57 61 47 60 52 50 65 57 00 98 84 67 91 61 95 67 97 78 98 82 00 94 89 91 95 84 54 82 98 00 00 94 91 91 89 45 50 57 79 72 10 95 79 31 47 72 79 91 90 58 78 58 69 41 65 76 80 1210 DISE 80 68 70 72 67 61 61 57 66 59 71 67 69 69 61 69 60 56 00 67 72 74 70 74 73 75 73 79 3 48 43 51 72 63 70 76 64 33 45 68 63 80 73 53 67 46 49 45 53 57 64 83 72 69 54 64 64 45 75 80 63 68 82 68 56 79 62 79 70 87 68 55 19 69 78 72 89 81 48 84 38 45 55 74 66 77 76 54 36 42 65 59 76 76 45 67 35 52 33 61 51 67 83 01 68 57 71 52 75 64 66 49 66 46 61 50 41 60 63 43 59 61 57 62 61 70 76 47 67 52 52 50 46 46 73 59 71 76 62 22 31 66 56 76 69 49 58 36 42 37 55 46 57 DISA 79 65 83 52 54 71 61 83 77 73 57 53 56 63 49 66 54 43 59 46 59 61 51 48 60 60 53 50 71 62 42 50 67 70 69 77 61 27 29 61 57 65 59 40 50 38 41 34 56 41 57 0158

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11/07/86

TECR5005

995 SEC ENG III



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ENGLISH - SECONDARY IV

INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of fifty multiple choice items measuring selected objectives in the curriculum strands of Literal, Interpretive, and Evaluative Comprehension, and Vocabulary. In addition, there is a writing portion that addresses the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage.

So that the test may be content valid for each high school, yet at the same time provide a measure of student performance system-wide, the test contains both school-developed and centrally developed portions. The test is organized so that items 1-20 are school-developed and tap literal and interpretive objectives, items 21-30 are school-developed and address Vocabulary objectives, and items 31-50 are centrally-developed and measure literal comprehension objectives (2 items), interpretive comprehension objectives (10 items), and evaluative comprehension objectives (8 items). Since the school-developed items vary from school to school, only the centrally-developed items will be analyzed.

The population includes all high school students (with the exception of the exam schools) who took a Secondary English IV course and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 63%. Of the twenty centrally-developed items there were four items which fewer than fifty percent of the students answered correctly. In literal comprehension students had difficulty with logical order (item # 32). In interpretive comprehension students are not mastering the objectives of fact/opinion (item # 39) and figurative language (item #'s 45 and 48).



DEPARTMENT OF EDUCATIONAL TESTING

CUTRICULUM REFERENCED FINAL

ENGLISH - SECONDARY IV

1985 - 1986

PART I	PART II									1	PAI	RT	I	ΙI							
1 - 20	21 - 30	3 1	3 2	3 3	3 4	3 5	3 6	3 7	3 8	3	4 0	4	4 2	4	4	4 5	4	4 7	4 8	4 9	5 0
School-developed portion - objectives drawn from categories B and C of High School Curriculum Objectives	School-developed portion - objectives drawn from category E of High School Curriculum Objectives Grade 12	B.4 \ Types of logical order	3	.2 Evaluating written material	D.5 Disting. Det. clear a unclear material	y written material	n	-	C.14 Fact/Opinion	<u>5</u>	D.7 } Propaganda techniques	٦,	D.8 7 Types of stereptyping)		0.10		C.10 Figurative language	•	C.10	C.10



996 SEC ENG IV TECRSOOS 11/07/86
PERCENTAGE OF CORRECT ANSWERS PER 11EM
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MATHEMATICS ELEMENTARY AND MIDDLE



INSTRUMENT AND POPULATION DESCRIPTION

The test is a fifty item multiple choice test measuring selected circled objectives in the curriculum strands of Numbers/Numeration (10 items), Fractions and Money (10 items), Measurement/Geometry (10 items), and Computation (20 items).

The population includes all students enrolled in Grade 1 who were administered an on-level test and for whom valid scores were reported.

SYSTEM STRENGTHS AND WEAKNESSES

Because of the young age of the students taking these tests they responded by writing directly in the test booklet, rather than on separate answer sheets. Teachers hand-scored the booklets and recorded the students' total scores on data collection sheets, thus individual item data for analysis are not available. Overall, stduents performed only fairly on this test with a system-wide average score of 74%. On both the Numbers/Numeration and Fractions/Money subtests the average score was 14 out of a possible 20 points. On the Measurement/Geometry subtest the average score was 16 out of a possible 20 points. On the Computation subtest the average score was 30 out of a possible 40 points. These data suggest that there is no one area in which students are having difficulty, instead it is with selected objectives in each of the strands.



-77-

12/24/86

BOSTON PUBLIC SCHOOLS CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT LEVEL 1

TECRPPDOS

			MATHEMA	LEVEL		
SCHOOL COOE	S CHOOL Name	NUMB•/NUMER• (DUT OF 10)	FRAC./ HONEY (OUT OF 10)	MEAS./ GEOM. (OUT OF 10)	COMPUT. (OUT OF 20)	"
4160	GARDNER FLEMENTARY	08	08	09	16	/
4170	GARFIFLD ELEMENTARY	06	06	07	13	/
4173	WINSHIP FLEMENTARY	07	07	07	15	/
4220	HAMILTON ELEMENTARY	07	06	06	14	/
4221	RALDWIN FLEMENTARY	08	06	09	17	/
4570	TORIN ELEMENTARY	07	07	06	15	/
4571	FARRAGUT ELEMENTARY	08	08	06	13	,
4010	AGASSIZ ELEMENTARY	07	07	06	15	/
4240	FLLIS FLEMENTARY	08	07	06	15	/
4241	HIGGINSON FLEMENTARY	07	08	09	17	/
4270	J KEHNFOY ELEMENTARY	0.6	07	06	17	/
£310	LONGFELLOW ELEMENTARY	06	06	C8	14	/
4311	MANNING ELEMENTARY	08	08	09	17	,
4370	WENDELL ELEMENTARY	08	07	06	16	/
437I	FULLER ELEMENTARY	06	06	01	12	/
4430	PARKMAN FLEMENTARY	09	09	09	ìc	,
DISA		07	07	06	15	/
4030	SEFTHOVEN ELEMENTARY	08	06	0.6	16	/
4031	KILMER FLEMENTARY	08	07	07	16	/
4081	BATES ELEMENTARY	07	0.6	06	14	/
4082	MOZART ELEMENTARY	07	05	07	15	/
4290	LEE FLEMENTARY	07	08	07	15	/
4560	SUMNER ELFMENTARY	07	0?	06	t 5	/
4561	PHILBPICK FLEMENTARY	07	07	07	15	1



			MATHEMA	FILE TATABLE		
COOF COOF	SCHOOL Name	NUMB./NUMER. (OUT OF 10)	FRAC./ MONEY (OUT OF 10)	MEAS./ GEOM. (OUT OF 10)	COMPUT. (OUT OF 20)	!! !!
4690	MATTAHUNT FLEMENTARY	07	07	08	14	,
4070	CHITTICK ELEMENTARY	08	08	08	17	,
4080	CONLEY ELEMENTARY	07	06	07	14	,
4151	TAYLOR ELEMENTARY	06	07	08	14	,
4192	F ROOSEVELT ELEMENTARY	08	08	08	14	,
4200	GREW ELEMENTARY	09	08	09	16	,
4201	CHANNING ELEMENTARY	08	Ğ7	ÕĒ	15	,
4670	P A SHAW ELEMENTARY	07	07	08	15	,
0158		07	07	08	15	,
4051	DICKERMAN ELEMENTARY	07	Ö6	οŻ	15	,
4130	S GREENWOOD ELEMENTARY	07	07	08	15	,
4131	ENDICOTT ELEMENTARY	07	07	07	14	,
4140	FVERETT ELEMENTARY	07	07	08	15	,
4150	FIFTELD ELEMENTARY	nr	07	06	16	,
4250	HOLLAND ELEMENTARY	0 7	06	07	13	,
4340	MAKSHALL ELFMENTARY	07	08	08	15	,
4350	HATHER FLEMENTARY	06	07	08	14	,
4390	KENNY ELEMENTARY	08	08	09	17	,
4391	OHEARN ELEMENTARY	07	06	08	12	,
4400	MURPHY ELEMENTARY	06	07	06	12	,
4550	STONE ELEMENTARY	07	08	09	17	,
4022	PERKINS ELEMENTARY	08	ŐĞ	Ó8	15	,
4052	WINTHROP ELEMENTARY	09	08	09	16	,
4100	DEVER FLEMENTARY	08	08	06	15	,

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12/24/86

BOSTON PUBLIC SCHOOLS CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE MEMORT LEVEL 1

----- MATHEMATICS -----SCHOOL NUMB./NUMER. FRAC./ MEAS./ COMPUT. SCHOOL MONE Y COOF NAME (DUT OF 10) GEOM. (OUT OF 20) (OUT OF 10) (OUT OF 10) HENNIGAN ELEMENTARY CURLEY FLEMENTARY HCKAY FLEMENTARY 0.8 OHRENBERGER ELEMENTARY TRUTTER ELEMENTARY HORACE MANN SCHOOL JACKSON MANN ELEMENTARY DISE DISA DISB DISC DTSO DISE SYSTEM WIDE TOTALS STOT



INSTRUMENT AND POPULATION DESCRIPTION

The test is a forty-item multiple choice instrument measuring selected circled objectives in the curriculum strands of Numbers/Numeration (8 items), Computation (6 items), Decimals (4 items), Measurement (6 items), Geometry (6 items), Fractions (5 items), and Graphs (5 items). The test serves both as the final examination and the State Basic Skills Test for grade 2 students.

The population includes all students enrolled in grade 2 who were administered an on-level test and for whom valid scores were reported.

SYSTEM STRENGTHS AND WEAKNESSES

Because of the young age of the students taking these tests they responded by writing directly in the test booklet, rather than on separate answer sheets. Teachers hand-scored the booklets and recorded the students' total scores on data collection sheets, thus individual item data for analysis are not available. Overall, students performed only fairly well on this test with a system-wide average score of 69%. In both Numbers/Numeration and Computation the average scores were 13 out of a possible 20 points. In Decimals the average score was 5 out of a possible 10 points. In both Measurement and Geometry the average scores were 10 out of a possible 15 points. Out of a possible 15 points in both Fractions and Graphs the average scores were 10 and 8 respectively. These data suggest that there is no one strand in which students are consistently performing poorly, instead there are difficulties with individual objectives across all strands.



BOSTON PUBLIC SCHOOLS CURRICULUM GEFERENCE TEST JUNE 1286 AVERAGE SCORE REPORT FVEL 2

			····· · · · · · · · · · · · · · · · ·	HATHEHAT	ICS			
CODE	SCHOOL NAME	NUMB./ NUMER. /UUT OF 8/	COMPUT. (OUT OF 6)	DEC. (OUT OF 4)	(3 THE OF (4)	GEOH. COUT OF 6:	FRACTIONS (OUT OF 5)	GRAFHS (OUT OF 5)
4160	GARDNER FEEHENTARY	હ	5	2	5	4	4	4
4170	GARFIELD ELEMENTARY	7	2	3	4	5	4	3
41.73	WINSHIP ELEMENTARY	5	5	2	5	4	4	4
4220	HAHILION ELEMENTARY	5	4	2	4	4	3	. 2
4221	BALDWIN ELEMENTARY	5	5	2	4	4	4	3
45 70	TOBIN ELEMENTARY	6	5	2	4	5	4	3
4571	PARRAGUT ELEMENTARY	5	5	2	4	4	4	q
4010	AGASSIZ ELEMENTARY	5	5	2	5	4	4	3
4240	FLUIS ELFHENTARY	5	5	2	5	4,	4	3
4241	HIGGINSON ELEMENTARY	6	5	?	5	5	4	3
4270	J KENNEDY ELEMENTARY	6	5	2	5	4	4	3
4310	LONGFFLLOW ELEMENTARY	3	5	1	5	3	3	2
4311	HANNING ELEHI'NTARY	6	5	3	5	5	4	4
4370	HENDELL ELFHENTARY	4	5	2	5	3	4	3
4371	FULLER FLEHENFARY	5	5	?	4	4	4	3
4430	PARKHAN ELFHENTARY	7	5	3	5	5	4	4
DISA		5	5	2	4	4	4	3
4030	REETHOVEN ELEMENTARY	5	5	2	4	5	4	3
4031	KILHER ELEMENTARY	7	5	2	4	5	4	4
4081	BATES ELEMENTARY	5	5	2	5	5	4	4
4082	HOZART FLEHENTAKY	7	4	3	5	5	Ą	4
4290	LEF ELFMENTARY	6	6	3	5	4	4	4
4560	SUMMER ELEMENTARY	6	5		4	4	4	4
41-61	PHILBRICK FLEMENIARY	6	5	3	i,	4	4	4

BOSTON PUBLIC SCHOOLS CURRICULUM REFERENCE IEST JUNE 1984 AVERAGE SCURE REFORT LEVEL 2

				HATHEHAT	1.EVE1. 1CS			
CODE CODE	SCHOOL NAME	NUMB./ NUMER. (OUT OF 8)	COMPUT.	DEC.	MEAS.	GEOM. (OUT OF 6)	FRACTIONS (OUT OF 5)	GRAPHS (OUT OF 5)
4690	MATTAHUNT ELEMENTARY	4	5	2	4	4	3	3
4070	CHITTICK ELEMENTARY	7	5	3	5	5	4	4
4080	CONLEY ELEMENTARY	5	5	3	5	4	4	3
4151	TAYLOR ELEMENTARY	6	*5	2	5	4	4	4
4192	F ROOSEVELT ELEMENTARY	6	5	2	5	4	4	4
4200	GREW ELEMENTARY	6	5	2	5	4	4	4
4201	CHANNING ELEMENTARY	5	5	2	5	4	4	4
4670	P A SHAW ELEMENTARY	4	5	2	5	3	4	3
DISH		6	5	2	5	4	4	3
4051	DICKERMAN ELEMENTARY	4	5	2	5	3	4	3
4130	S GREENWOOD ELEMENTARY	4	5	1	4	4	3	3
4131	ENDICOTT ELEMENTARY	5	5	2	5	4	4	3
4140	EVERETT ELEMENTARY	4	4	2	4	4	4	3
4150	FIFIELD ELEMENTARY	4	5	1	5	3	4	3
4250	HOLLAND ELEMENTARY	6	5	2	4	4	4	3
4340	MARSHALL ELEMENTARY	6	5	2	4	4	4	4
4350	MATHER ELEMENTARY	6	5	3	4	5	4	4
4390	KENNY FLEMENTARY	6	5	3	5	5	4	4
4391	OHEARN ELEMENTARY	5	5	2	4	4	4	3
4400	HURPHY ELEMENTARY	6	5	2	5	5	4	4
4550	SIONE ELEMENTARY	6	5	3	5	5	4	4
4022	FERKINS FLEMENTARY	5	5	3	4	4	4	4
4052	WINTHROP ELEMENTARY	5	6	2	5	4	5	3
4100	DEVER ELEMENTARY	6	5	3	5	5	4	4

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BOZTON FORFIC ZCHOOFZ

CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE STORE REPORT LEVEL 2

			···	MATUENAT	LEVEL			
CODE	NAME ZCHOOL	NUMB,/ NUMER. (OUT OF 8)	COMPUT.	DEC.	MEAS.	GEOM.	FRACTIONS (OUT OF 5)	GRAPHS (CH 10 THO)
4120	EMERSON ELEMENTARY	6	5	3	5	4	4	3
4121	MASON ELEMENTARY	5	5	2	4	4	4	4
4530	RUSSELL ELEMENTARY	6	5	ŗ	5	4	4	4
4531	CLAF FLEMENTARY	7	5	3	5	5	4	4
4590	TYNAN ELEMENTARY	7	5	3	5	5	4	4
4592	PERRY ELEMENTARY	7	5	2	5	5	4	4
4630	CONDON ELEMENTARY	6	5	:	5	5	4	4
D12.(:		6	5	2	4	4	4	3
4280	KENT ELEMENTARY	•;	5	2	5	4	4	4
4283	WERESCOTT ELEMENTARY	6	5	2	5	4	4	4
4381	ELIOT ELEMENTARY	4	5	2	5	4	4	3
4640	BLACKSIONE ELEMENTARY	5	5	2	4	4	4	4
4650	QUINCY ELEMENTARY	6	5	3	4	4	4	4
4062	BRADLEY ELEMENTARY	5	5	2	4	4	۵	4
9321	ALIGHTERI FLEMENTARY	5	5	2	5	4	4	3
4322	OTIS ELEMENTARY	b	5	2	5	5	4	4
4361	ADAMS ELEMENTARY	3	6	1	5	3	3	3
4541	F KENNEDY FLEMENTARY	6	5	3	5	5	4	4
+543	ODONNELL ELEMENTARY	5	5	3	4	4	4	4
D12D		5	5	2	5	4	4	4
4053	HERNANDEZ ELEMENTARY	6	5	3	'5	4	4	4
4061	GUILD FLEMENIARY	6	5	3	5	5	4	4
4113	HALE ELEMENTARY	4	5	2	4	5	4	4
4210	HALEY ELEMENTARY	6	5	3	5	5	4	4

12/29/86

ROSTON PURETC SCHOOLS
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REFORT
MATHEMATICS AND SCIENCE LEVEL 2

				MATHEMAT	IC2			
CODE	SCHOOL NAME	NUMP./ NUMER. (OUT OF 8)	COMPUT. (OUT OF 6)	DEC. (OUT OF 4)	MEAS. (OUT OF 6)	GEOM. (OUT OF 6)	FRACTIONS (OUT OF 5)	GRAPHS (OUT OF 5)
4230	HENNIGAN ELEMENIARY	4	5	1	4	3	3	3
4271	CURLEY ELEMENTARY	5	5	3	5	4	4	4
4360	MCKAY ELEMENTARY	6	5	2	5	5	4	4
4410	OHRENBERGER ELEMENTARY	5	5	2	5	4	4	3
4580	TROTTER ELEMENTARY	5	5	2	4	4	4	4
4610	HURACE MANN SCHOOL	2	3	1	3	2	4	3
4520	JACKSON HANN ELEHENTARY	4	5	2	4	3	4	3
DISE		5	5	2	4	4	4	3
DISA		5	5	2	4	4	4	3
D12B		6	5	2	5	4	4	3
D120.		6	5	2	4	4	4	3
D12D		5	5	2	5	4	4	4
D12E		5	5	2	4	4	4	3
1012	SYSTEM WIDE TOTALS	5	5	2	4	4	4	3



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SYSTEM SUMMARY ANALYSIS

MATHEMATICS

GRADES 3-8

DESCRIPTION OF INSTRUMENTS

Each test for Grades 3-7 is a forty-item, multiple choice test that addresses the circled objectives in each of the Mathematics curriculum strands (Numbers and Numeration, Computation, Fractions, Decimals and Percents, Measurement, Geometry, and Estimating/Graphs). The Level 3 test is a fifty-nine item instrument developed by the State Department and mandated for Grade 8 students. Since it broadly correlates with the curriculum objectives and in the interest of limiting testing, the instrument serves both the State and system requirements.

DESCRIPTION OF CHART

On the following page a chart is provided that identifies certain items and corresponding objectives at each level. The items are those which fewer than 50% of the students answered correctly.

GENERAL TRENDS

Generally, performance is good on the subtests of Numbers/Numeration and Computation with approximately seventy to eighty percent of the students answering the items correctly. However, performance is markedly poor on the subtests of Fractions and Decimals. These deficits have a cumulative effect in that as the as the grade level of the test increases, the number of incorrect items increases. Only one of the forty items in Level 3 is identified, whereas, by Level 7, nineteen of the forty items (48%) were answered incorrectly by more than 50% of the students. Of these items the greatest preponderance of objectives tapped are the Fraction and Decimals objectives. Another problem area exists in the Measurement subtest, in particular, the objectives relating to English and metric linear measurements, units of capacity, and temperature.

CURRICULIM REFERENCED TEST ANALYSIS 1985 - 1986 DEPARTMENT OF EDUCATIONAL TESTING MATHEMATICS Grades 3 - 8

LEVEL	ITEM /	% ARSWERING CORRECTLY	OBJECTIVE SUMBER	OBJECTIVE DESCRIPTION
3	21	48\$	C.7	solving simple word problems w. frac.
	23	44%	C.2	arranging unit frac. in order of size
	29	47%	D.2	solving word problems
ŢĪ.	19	37%	C.2	comparing size of two common fractions
	20	47%	C.10	writing improper frac. as mixed numb.
	21	47%	C.9	writing mixed numb. as improper frac.
	25	45%	D.7	word prob. involv. dec. and money
	31	43%	E.1	telling what time it will be
	33	46%	F.1	identifying types of lines
	37	34%	G.1	rounding off #'s
5	12	43%	C.13	dividing common fractions
	14 16	41%	C.5	add. & sub. common frac. w. unlike den
	17	42%	C.9	sub. common frac. from one-digit whole
	18	43 % 46 %	C.11	mult. common frac. and whole number
	19	46%	C.12	mult. mixed # by common fraction
	20	38%	C.14 C.17	div. frac. by whole # & visa versa
	23	37%	D.7	solv. simple proportion prob.
	29	26%	E.7	div. dec. & mixed dec. of two digits
	30	46%	E.8	ado. 4 sub. English linear meas.
	36	46%	F.12	add. & sub. English units of capacity finding area of rectangle or square
	37	44%	G.2	rounding off mixed decimals
6	14	49%	C.7	add. mixed #'s w. like denom.
	15	44~	C.8	sub. mixed #'s w. like denom.
i	17	45	0.10	mult. 2 or 3 comm. or mixed frac.
	19	43%	C.11	div. comm. or mixed frac. or whole /'s
	20	47%	C.13	solving ratio & prop. problems
	22	31%	D.3	arranging dec. in order of size
	26	29%	D.10	chging comm. frac. w. term. dec.
l	28	46%	D.17	finding % of whole number
- 1	30	33%	E.10	approx. Celsius temp. reading
	32	46%	E.6	renaming improper Eng. & metric linear
	38	38%	G.4	probability in word prob.
	39	38%	G.8	info. from table or schedule
7	11 13	41%	D.14	chging common frac. to %'s
1	14	46%	C.14	one and two-step word prob. w. frac.
	15	36%	c.6	fractional part of whole numb.
l	16	41%	E.9	boiling & freez. pts. of water
	17	46%	C.8	sub. mixed. #'s w. unlike denom.
1	21	39%	C.9	mult. 2 or 3 common frac.
İ	25	38%	D. 12	dec. place value to millionth place
	26	37%	D.9	dec. to thous. place & mixed # s to %'s dividing by moving dec. point
Ī	28	28%	D.16	finding % of whole # or mixed dec.
ļ	29	41%	E.1	calc. elapsed time
- 1	31	22%	E.10	app. temp. reading
	32	33%	F.3	identif. parts of angles
	33	36%	F.13	finding perimeter
1	34	33%	F.15	area of tri., parall., or trap.
1	35	42%	F. 16	identif. parts of circles
	37	37\$	G. 3	est. answers by rounding off
8. •	9	41%	N.A.	'compute by using time
ļ	12 18	44%	M.A.	compute by using temperature
- !	19	48%	N.A.	est. Weight/mass, cap., time, temp.
- 1	23	39%	N.A.	est. Weight/mass, cap., time, temp.
	24	41%	n.A.	perm. of tri., sq., rect.
- 1	47	42%	N.A.	area of tri., sq., rect.
ļ	48	33% 44%	N.A.	using ratio and prop.
	53	49%	N.A.	using simple formulas
Į.		~7#	N.A.	finding % of # in situations
	54	49%	N.A.	changing frac. to dec.

^{*} Basic Skills Test





INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled o' jectives in the curriculum strands of Numbers/Numeration (7 items), Computation (10 items), Fractions (6 items), Decimals/Percents (6 items), Measurement (4 items), Geometry (3 items), and Estimating/Graphs (4 items).

The population includes all students enrolled in grade 3 who took an on-level test and for whom valid answer sheets were turned in.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed well on this test with a system-wide average of 76%. Generally, students seem to be mastering the objectives in the subtests of Numbers/Numeration, Measurement, Geometry, and Estimating/Graphs and most of the items tapped in Computation, Fractions, and Decimals/Percents. However, within these subtests, there are isolated objectives which are not being mastered by more than fifty percent of the students. Within Computation, students are having difficulty with multiplying one or two digits by 10 or 100 adding zeros. Within the Fraction domain students are having difficulty with word problems and arranging unit fractions in order of size. In Decimals/Percents the difficulty lies in solving word problems.



DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

1985 - 1986

MATHEMATICS - LEVEL 3

MABERS AND NEMERATION	COMPUTATION	FPACTIONS	TRICIMALS AND PERCENTS	PEASITIBENT	GEOMETRY	ESTIMATING/ GRAINS
1 2 3 4 5 6 7	1 1 1 1 1 1 1 1 8 9 0 1 2 7 4 5 6 7	1 1 2 2 2 2 8 9 0 1 2 3	2 2 2 2 2 2 4 5 6 7 8 9	3 3 3 3 0 1 2 3	3 3 3 4 5 6	3 3 3 4 7 8 9 0
Nos. from 0 to 9,999 !witiplying 3-digit nos. by 1-digit nos. Writing nos. that come before or after a given no. Identifying odd and even nos. Identifying place value to the thousand place Skip counting by twos, threes, etc. Identifying other ways of writing a given no.	Nemorizing multiplication facts Adding nos. with up to three digits written vertically Subtracting 3-digit nos. written vertically Multiplying urree 1-digit nos. written horizontally Manorizing division facts Solving word problems Adding two 1-, 2-, 3-digit nos. written vert. or horiz. Multiplying 3-digit nos. by 1-digit nos. written vert. Multiplying 1- and 2-digit nos. by 10 or 100 add zeroes Solving word problems	Identifying fractions equal to one whole Identifying equivalent fractions using drawings Writing fractions up to eigths for shaded drawings Solving simple word problems involving fractions Writing fractions up to eigths for shaded drawings Arranging unit fractions in order of size; drawings	Writing nos. for dollars and cents, written words Smallest no. of coins needed to make an amt. of noney Adding and subtracting dollars and cents Computing the value of a collection of coins; pictures Adding and subtracting dollars and cents Solving word problems	Telling time from a clock face Finding a specific day or date on a calendar Using a chart of time equivalencies with abbreviations Reading a Fahrenheit thermometer	Identifying point where two sts. intersect on a map Finding the perimeter of a square or rectangle Identifying six geometric solids	Rounding off numbers to the nearest ten or hundred Reading and constructing picture or bar graphs
4.8.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4	8 8 8 8 8 8 8 8 7 7 8 8 8 8 8 8 9 8 9 8	241712			# # # # # # # # # # # # # # # # # # #	6.1 6.2 6.2



932 MATH LEVE 3 TECR5005 11/07/86
PEPCENTAGE OF CORRECT ANSWERS PER LITEM
NOTE 100 PERCENT ON A PARTICULAR LITEM IS INDICATED BY **

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL SCHL ** 88 84 84 70 72 78 84 88 76 76 82 96 90 80 58 88 90 90 80 72 80 90 58 76 98 94 96 88 90 90 88 76 90 ** 82 41 60 95 91 91 91 82 73 69 ** 82 82 91 91 86 95 86 56 95 73 86 91 56 95 69 95 91 73 95 95 52 82 ** 95 ** 82 95 91 91 86 95 ** 86 ** 75 90 95 80 95 85 ** 85 65 90 75 ** 85 70 75 90 75 95 60 65 95 60 95 95 70 80 85 30 70 90 95 95 90 85 ** 70 65 85 ** 82 93 86 63 67 67 45 76 91 80 67 82 89 78 80 73 60 89 34 67 76 34 89 19 73 65 65 71 73 47 82 76 71 73 52 63 56 32 50 54 64 67 ** 97 82 77 82 65 72 85 80 85 87 80 92 87 80 80 90 57 87 77 72 92 80 87 90 85 80 9> 51 80 92 95 92 85 92 92 67 70 82 97 83 94 74 72 88 57 64 72 75 70 66 72 53 92 74 70 35 81 79 79 83 38 92 44 94 77 81 70 81 40 53 92 88 92 61 87 83 27 55 75 94 72 96 73 80 92 84 84 88 69 80 80 80 84 69 84 92 46 30 92 88 90 84 57 88 ** 88 96 69 88 69 57 48 96 96 96 96 88 88 80 88 ** ** 83 98 77 73 80 71 68 68 90 78 72 /3 77 94 88 73 64 87 74 71 72 57 91 42 84 80 68 75 81 51 70 94 87 83 73 63 73 62 58 71 95 75 98 58 80 75 63 56 63 88 65 58 55 75 86 80 55 35 71 75 66 73 45 78 30 86 70 48 65 70 28 46 90 75 83 66 58 68 48 73 58 81 66 4240 95 91 91 95 78 82 86 69 78 69 95 86 95 86 56 73 95 91 86 86 82 ** 73 95 86 52 95 82 60 65 ** 95 95 73 95 86 91 82 ** 95 85 4241 98 69 88 88 75 81 88 86 61 81 86 83 94 84 75 67 92 84 86 83 47 94 35 94 86 69 92 77 52 71 92 86 96 79 90 92 58 69 75 ** 81 ** H2 H5 H5 75 71 60 57 78 64 89 64 89 85 53 46 92 82 75 67 60 85 35 92 78 64 82 89 42 15 96 92 89 78 H5 85 42 53 71 96 75 95 85 80 85 76 71 61 76 80 76 71 57 90 90 71 61 80 85 80 80 52 85 38 90 80 71 76 95 33 71 ** 90 ** 76 85 95 47 66 80 95 77 4311 ** 92 85 92 70 85 70 85 85 77 81 81 85 92 85 48 88 77 62 70 51 92 44 77 81 81 85 85 66 85 88 88 88 70 81 85 70 77 81 96 80 ** 93 85 87 71 76 71 95 84 87 84 75 95 95 75 75 92 87 84 84 37 90 18 95 82 71 89 92 42 67 95 89 98 73 79 85 56 68 82 96 80 96 93 93 96 80 77 83 83 74 83 80 83 93 83 70 41 87 80 77 83 61 93 64 90 83 74 87 70 64 64 96 80 93 83 70 90 80 74 80 93 81 4+30 97 81 81 84 72 70 74 85 78 74 79 76 91 86 70 57 88 75 78 78 51 90 46 89 81 69 80 82 48 70 93 87 90 75 79 82 60 67 77 94 77 DISA 95 55 45 80 55 60 65 70 75 65 60 75 90 80 30 30 80 65 65 60 40 85 35 * 95 55 75 65 25 65 ** 85 ** 60 50 90 55 50 70 ** 67 ** 68 72 81 86 72 86 81 72 63 77 59 81 81 36 54 86 72 90 86 40 90 22 86 77 68 63 77 21 68 86 81 90 72 50 72 63 59 63 90 71 4031 ** 75 78 84 66 75 60 72 93 72 75 51 ** 87 42 72 96 81 90 84 45 93 24 93 90 72 93 75 54 78 87 90 90 72 66 72 48 75 87 96 77 ** 76 76 76 52 61 61 85 61 52 52 66 90 85 52 47 95 38 95 47 42 76 23 95 95 57 85 85 28 76 80 85 80 42 66 80 57 57 61 95 68 91 86 71 66 66 75 73 75 82 82 64 66 93 88 75 51 84 48 71 68 44 86 20 86 86 73 77 77 42 55 86 82 82 64 73 73 51 68 48 88 71 4290 96 85 75 82 75 63 70 84 71 80 70 77 87 85 56 64 87 75 89 77 25 84 29 92 82 75 82 84 52 63 91 92 92 70 82 82 75 64 70 94 76 ** 84 72 83 80 64 68 88 88 40 80 68 84 88 ··8 64 84 72 88 80 52 88 32 96 92 68 76 76 44 84 80 92 92 80 64 96 60 64 72 88 75 94 85 69 78 51 63 68 85 77 88 60 73 88 85 85 80 90 67 76 56 50 85 39 94 79 78 71 77 52 34 93 77 88 71 77 79 62 54 71 89 73 92 78 85 87 68 59 85 80 78 /3 75 68 89 87 70 84 84 77 75 70 59 80 59 85 80 59 78 70 50 61 92 89 80 66 63 85 59 61 78 94 76 4* 92 92 ** 92 92 88 92 88 96 76 88 92 96 84 88 ** 84 88 96 72 96 60 96 88 92 92 90 72 ** ** 96 96 88 92 92 96 92 ** 89 93 89 92 90 76 78 81 87 81 85 92 79 92 98 78 62 96 67 82 64 68 82 54 92 89 76 68 84 45 64 93 92 89 71 64 85 73 78 73 95 80 4151 93 87 75 84 71 75 68 87 73 67 79 76 87 89 78 70 82 75 78 71 48 82 59 90 75 64 64 71 39 57 90 84 87 73 78 81 60 57 78 92 75 93 90 86 76 76 60 63 80 85 73 83 66 90 90 73 63 86 83 76 80 50 90 66 90 93 76 76 73 73 73 73 73 73 73 93 73 83 73 66 90 90 79 95 95 69 91 73 86 69 ** 73 43 82 73 ** 86 78 60 78 56 86 78 47 91 43 69 86 60 82 78 39 69 ** ** 91 73 82 78 91 82 95 95 78 4200 95 67 80 87 73 75 63 85 90 78 87 68 92 92 73 56 97 56 85 75 46 95 14 92 90 78 87 82 58 73 ** 97 87 75 85 95 85 80 85 90 80 4201 ** 78 78 ** 68 84 78 78 84 57 84 73 94 ** 52 52 89 94 73 78 36 89 31 ** 84 78 89 89 89 68 73 ** 94 89 89 94 78 52 63 63 ** 79 95 83 77 85 69 70 72 83 79 74 74 71 90 89 68 61 87 69 81 71 49 86 40 91 85 71 77 78 48 62 92 87 88 71 74 82 66 66 74 93 76 97 76 78 89 78 71 65 92 57 73 71 76 92 81 60 81 92 68 71 89 63 86 81 92 65 60 81 71 65 50 92 89 94 76 63 81 60 57 76 89 76 4051 92 73 68 82 64 65 64 78 65 62 67 67 87 82 53 48 87 64 76 60 43 81 34 87 84 56 68 76 39 46 98 73 85 78 78 73 59 59 59 89 69 4130 ** 87 61 90 67 58 58 96 64 77 64 77 96 87 61 67 83 61 77 61 51 83 45 83 83 70 77 80 45 51 93 87 87 61 70 70 41 48 67 87 72 4131 ** 74 66 96 74 81 85 85 81 62 48 62 96 96 51 62 96 59 85 70 55 96 51 96 85 74 88 74 59 74 ** 96 88 77 77 85 55 62 81 ** 77 95 70 85 89 76 70 74 82 72 70 82 78 91 87 53 51 89 61 80 76 42 89 27 85 85 87 80 80 44 61 97 97 97 80 82 82 72 65 80 95 76 4150 93 68 77 83 64 70 67 75 68 53 68 55 93 86 49 40 93 74 74 71 51 82 41 91 80 47 80 76 40 56 86 82 77 61 70 76 40 50 61 92 69 4250 88 75 72 78 68 69 73 72 70 71 60 62 88 79 62 46 81 70 67 78 43 92 30 88 69 58 67 70 42 59 88 81 90 73 73 72 64 54 59 87 70 97 86 80 84 61 65 60 86 70 70 61 60 89 88 69 38 89 52 73 81 42 85 28 88 84 61 84 70 38 62 90 84 84 74 57 74 50 48 65 88 70 ** 95 75 87 70 95 54 58 75 87 66 58 ** ** 70 50 ** 50 79 83 58 75 20 91 87 70 83 58 54 75 95 67 95 66 79 83 50 70 79 95 75 91 26 69 73 69 56 47 73 56 56 78 52 ** 73 26 34 91 73 78 65 52 86 0 91 91 52 86 73 52 60 91 95 95 73 52 73 78 73 86 91 68 98 34 82 64 58 66 64 74 76 66 64 70 90 86 45 50 94 58 66 62 39 84 37 94 84 74 80 90 47 66 94 82 88 68 76 74 74 66 68 98 72 ** 92 72 92 64 80 80 92 80 68 92 84 88 96 88 80 72 72 64 72 48 68 68 86 86 86 76 92 76 64 68 84 76 88 64 60 84 20 32 68 92 75 4550 ** ** 81 ** 68 77 90 86 81 77 77 86 ** 90 68 63 95 45 77 77 54 90 27 ** 95 86 77 86 50 54 95 95 86 72 72 68 77 72 77 95 79



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PERCENTAGE OF CORRECT ACOMERS PER 11cm

NUTE 100 PERCENT ON A PARTICULAR LITEM IS INDICATED BY **

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 33 39 ° \ TOTAL SCHL 4352 •• 77 83 94 72 83 88 88 72 61 66 77 *• •• 61 83 84 83 83 61 50 83 27 •• 80 83 94 88 44 77 *• *• 83 72 77 *• 83 88 77 *• 81 ●● 84 90 95 87 86 89 84 64 86 83 70 95 92 66 72 90 84 84 84 58 95 75 90 86 78 81 84 67 78 93 89 95 84 96 87 80 78 84 96 34 ** 85 75 45 75 60 65 90 75 40 80 80 95 ** 60 80 95 45 45 85 65 95 45 ** 85 85 80 70 80 ** 95 95 90 60 70 90 80 80 ** 83 ** 94 82 88 88 70 82 82 58 76 64 88 ** 58 76 ** 70 76 82 64 ** 35 ** ** 82 94 88 76 82 88 94 88 94 64 82 64 70 ** ** 82 98 68 81 86 71 70 86 68 76 68 81 58 93 88 60 43 88 70 61 80 61 90 46 91 90 58 80 73 41 73 93 83 68 70 90 90 71 70 76 96 75 ●● 88 83 ●● 94 83 83 83 ●● 77 83 83 ●● 88 72 OU Na 66 94 77 66 88 61 83 88 72 83 88 61 72 ♣● ●● 94 88 61 94 77 72 94 94 84 98 84 82 84 75 81 77 93 75 74 75 75 81 86 63 81 84 89 60 81 50 82 53 73 89 68 72 75 51 74 86 86 87 72 82 87 58 55 67 89 77 ** 78 85 92 ** 64 85 92 85 85 85 71 92 85 78 71 ** 92 92 ** 78 ** 78 ** 85 64 92 78 50 85 92 92 ** 71 85 85 78 92 85 ** 86 89 89 88 87 67 64 75 82 73 77 72 81 86 86 68 53 84 58 77 60 49 83 49 90 80 69 83 7; 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INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Numbers/Num-eration (4 items), Computation (11 items), Fractions (6 items), Decimals (4 items), Measurement (6 items), Geometry (5 items), and Estimating/Graphs (4 items).

The population includes all students enrolled in grade 4 who took an on-level test and for whom valid answer sheets were turned in.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed well on this test with a system-wide average score of 72%. Generally, students appear to be mastering the objectives in the subtests of Numbers/Numeration and Computation and most of the objectives tapped in Decimals, Measurement, Geometry and Estimating/Graphs. However, within these subtests, there are isolated objectives which are not being mastered by more than fifty percent of the students. Within Decimals students are having difficulty with word problems involving decimals and money. Within the Measurement domain students are not mastering the objective of telling what time it will be a specified number of hours and minutes hence. In Geometry the difficulty lies with identifying parallel, perpendicular, and intersecting lines on a street map. In Estimating/Graphs only 34% of the students are able to round off numbers to the nearest ten, hundred or thousand.

The most severe deficits as a strand lie in Fractions where of six items, there are four that fewer than 60% of the students answered correctly. The objectives measured by these items are renaming equivalent fractions to higher denominators, comparing the size of fractions, writing mixed numbers as improper fractions, and its inverse.



DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL MATHEMATICS - LEVEL 4

1985 - 1986

A.5 Skip counting by thos, threst, etc. A.6 Identifying place value to the millions place A.5 Identifying place value to the millions place A.6 Identifying place value to the millions place A.8 Identifying place value to the millions place B.8 Subtracting two dedigit mas with regrouping, vertically B.8 Subtracting two dedigit mas with regrouping, vertically B.8 Subtracting and dedigit mas with regrouping, vertically B.8 Subtracting and dedigit mas with regrouping, vertically B.8 Subtracting and dedigit mas with regrouping, vertically B.9 Subtracting and dedigit mas with regrouping, vertically B.9 Subtracting and dedigit mas with an experimental problem B.9 Subtracting and by dedigit mas with libe demandation B.9 Subtracting and by dedigit mas with libe demandation B.9 Subtracting and an extraction and manufacting with the demandation B.9 Subtracting and an extraction and an extraction with the demandation B.9 Subtracting and an extraction and an extraction with the demandation B.9 Subtracting basic contains between seconds and minutes, set. B.9 Subtracting basic contains between seconds and minutes, set. B.9 Subtracting basic contains without has the most to be minuted and account the library designs, feet, etc. B.9 Subtracting desire that has it will be in o. of hars, and account the real will be accounted to the instruction of a security and a square feeting the perimeter of a rectangle and a square feeting the perimeter of a rectangle wid desiring and a square feeting the perimeter of a rectangle wid desiring and a square feeting the perimeter of a rectangle wid desiring and a square feeting the perimeter of a rectangle wid desiring and a square feeting the perimeter of a rectangle wid desiring and a square feeting the perimeter of a rectangle wid desired with the perimeter of a rectangle wid a square feeting the perimeter of a rectangle wid a square feeting the perimeter of a rectangle wid a square feeting the perimeter of a rectangle wid a square feeting the perimeter of a rectangle wid a square feeting th	MIMBERS AND		Ţ	— ———————————————————————————————————		_	
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	Skip counting by twos, threes, etc. Identifying any number as odd or even Ariting numerals to the millions place Identifying place value to the millions	Adding threedigit numbers written vertically Subtracting two 4-digit nos. with regrouping; vertically Subtracting malitiplication facts through 12 x i.2 Nemorizing division facts through 144 - 12 Subtracting a 2-digit from a 3-digit no. Adding two 3- and 4-digit nos. written vert. or horis Multiplying 3-digit nos. by 2-digit nos.; vert. Multiplying a 2-digit no. by a 1-digit no.; vert. 20 Solving one and two-step word problems Dividing 4-digit by 1 digit nos.	Identifying fractions equal to one whole Remaing equivalent fractions to higher desceinators Adding and subtracting the mixed nos. with libs demo Comparing the size of two common fractions using Writing improper fractions as mixed numbers Writing mixed numbers as improper fractions	Whiting mos. for dollars and cents written in words Writing one quarter, one half and three quarters in Given four sets of coins, identifying which has the Solving word problems involving decimals and money	Doing one-step conversions between seconds and minutes, Memorizing basic equivalencies of units of time Identifying the appropriate unit of measurement identifying the appropriate measuring instrument Doing one-step conversions between inches, feet, etc. Telling what time it will be; no. of hrs. and mins. hence	Identifying nine two-dimensional figures Identifying parallel, perpendicular, and intersecting lines Identifying where these shapes appear in the real world Finding the perimeter of a rectangle and a square Recognizing seven geometric solids given drawings and list	Rounding nos. off to the nextest tem, hundred or thousand Estimating enswers to word problems by rounding off Using picture and ber graphs to answer ques. and solve prob.



942 MATH LLVL 4 TI Cl. 5909 11/0//36 PERCENTAGE OF CURRECT ANSWERS PER LIEM NOTE 100 PERCENT ON A PARTICULAR ITEM ES INDICATED BY CO

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942 MATH LEVE 4 TECRSODS 11/07/80
PERCENTAGE OF CORPECT ANSWERS PLK ITCH
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

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83 91 85 93 88 86 92 71 90 64 68 59 91 58 70 37 47 47 93 89 74 45 78 65 81 91 59 45 90 46 77 54 70 34 66 93 89 72



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INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Numbers/Numeration (2 items), Computation (6 items), Fractions (12 items), Decimals/Percents (5 items), Measurement (7 items), Geometry (4 items), and Fstimating/Graphs (4 items). The test serves as both the final examination and the State Basic Skills Test for grade 5 students.

The population includes all students enrolled in grade 5 who took an on-level test and for whom valid answer sheets were turned in.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, performance on this test was fair with a system-wide average score of 65% Generally, students appear to be mastering the objectives measured in the Numbers/Numeration and Computation subtests and most of the objectives tapped in Decimals/Percents, Measurement, Geometry, and Estimating/Graphs. However, within those subtests, there are isolated objectives which are not being mastered by more than fifty percent of the students. Within Decimals/Percents students are having difficulty with dividing decimals and mixed decimals. Within the Measurement domain students are not mastering the objectives involving English units of measurement. In Geometry the difficulty lies with finding the area of a rectangle or a square. In Estimating/Graphs only 44% of the students were able to round off mixed decimals to the nearest whole number.

The most severe deficits as a strand lie in Fractions where of twelve items, there are ten that fewer than 60% of the students answered correctly. The objectives measured by these items are adding, subtracting, dividing, and multiplying of fractions and mixed fractions and solving word problems involving fractions.



-99-

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

MATHEMATICS - LEVEL 5

1985 1986

NUMBERS AND NUMERATION	COMPUTATION	PRACTIONS	TECIMALS AND PERCENTS	HEASUREPENT	GEOMETRY	ESTEMATING/ CRAPIS
1 2	345678	1 1 1 1 1 1 1 1 1 1 2 9 0 1 2 3 4 5 6 7 8 9 0	2 2 2 2 2 1 2 3 4 5	2 2 2 2 3 3 3 6 7 8 9 0 1 2	3 3 3 3 3 4 5 6	3 3 3 4 7 8 9 0
Writing numerals to the hundred millions place identifying place value to the hundred millions place	Multiplying 4-digit multiplicands by 1-digit multipliers Dividing 5-digit numbers by 2-digit numbers with remainder Finding the averago f a set of 2-digit numbers Adding columns of furt 4-digit nos. Solving one and two-step word problems Finding the missing info. needed to solve a word problem	Shading in a fractional part of a whole unit Identifying fractions equivalent to one half, one third, etc. Multiplying common fractions with cancellation Dividing common fractions with cancellation Dividing and subtracting common fractions with unlike denominating and subtracting mined noe. with like denominators Subtracting a common fraction from a one-digit whole no. Multiplying a common fraction and a whole number Multiplying a drawn no. by a common fraction and a whole number Multiplying a mixed no. by a common fraction Dividing fractions by whole numbers and vice-versa Solving simple proportion probs. In fraction and ration form	Adding and subtracting decimals and mixed decimals Multiplying simple decimals and mixed decimals Dividing decimals and mixed decimals of two digits Solving one and two-step word problems Applying the complementarity of percents to 100%	Calculating elapsed time given two points in time Telling the no. of days in eq. month and order of the menths Adding and subtracting English linear measurements Adding and subtracting metric linear measurements Adding and subtracting Figlish units of capacity Identifying the appropriate measuring instrument for a task Memorizing the boiling and freezing points of water; Celsius	Identifying terms dealing with lines given a map or drawing Identifying where these shapes appear in the real world Finding the perimeter of polygons Finding the area of a rectangle or square	Rounding off mixed decimals to the nearest whole number Using picture, bar and line graphs to answer questions Estimating answers to word problems by rounding off Rounding off whole numbers
4.4 4.4	8.4 8.9 8.1 8.1 8.1 8.1	71441 71441 71441	0.5 0.0 0.9 0.9	ពាញ់ព្យាញ់ព្យាញ ដល់ ៦ / ១ ១ ។ ដ	F.1 F.7 F.11 F.12	00.2 0.3 0.1

952 MATH LEVE 5 TECP5005 11/07/86
PERCENTAGE OF CORRECT ANSWERS PER LITEM
NOTE 100 PERCENT ON A PARTICULAR LITEM IS INDICATED by **

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 16 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TUTAL SCHL 95 80 92 83 71 95 97 80 97 88 69 57 45 57 59 47 9 47 54 35 78 71 57 97 85 66 83 59 21 66 ** 50 52 78 85 66 52 92 76 88 69 4170 94 88 76 35 41 88 82 94 94 47 23 17 47 5 41 17 0 17 5 35 35 41 0 94 64 70 94 47 17 41 70 64 58 82 82 64 17 88 64 88 53 90 67 96 67 25 ** 83 87 87 64 61 51 51 35 51 29 45 41 51 6 80 64 45 90 90 64 67 48 22 38 70 77 16 90 67 54 41 83 58 70 61 4173 ** 75 81 93 /5 87 81 87 87 62 50 37 56 50 75 18 43 56 43 18 87 56 37 81 56 81 56 43 6 50 93 56 81 93 87 25 43 87 68 87 64 97 79 91 79 55 91 91 79 82 76 79 79 67 67 82 70 70 61 64 50 82 73 50 85 61 70 79 50 29 52 73 44 55 88 73 58 47 73 79 76 70 92 68 92 74 56 86 90 96 94 64 39 31 39 31 45 39 33 33 25 45 60 60 33 90 56 60 72 50 39 41 68 80 62 86 74 41 39 86 52 76 60 97 81 93 85 72 89 93 ** 93 66 77 64 72 41 70 45 47 79 64 54 75 75 33 95 85 89 79 83 50 77 91 79 81 93 81 77 50 95 66 89 76 94 68 81 62 44 85 87 82 82 58 28 2 22 24 35 20 12 34 21 11 58 52 25 85 50 58 67 35 20 20 80 58 70 88 32 25 25 80 45 84 50 94 66 90 80 53 92 84 94 84 65 68 41 60 40 50 30 22 46 52 40 89 53 38 90 74 70 78 65 25 34 82 69 77 80 64 48 40 92 49 76 63 ** ** ** ** 70 ** ** 90 ** ** 60 70 80 30 90 90 70 60 60 90 90 90 60 ** ** 80 ** 60 50 20 ** 80 ** 80 70 60 90 ** 80 ** 61 95 83 93 81 71 97 89 91 83 75 67 51 55 38 61 61 63 42 53 51 81 63 53 91 75 55 89 63 40 59 87 71 81 87 69 65 40 89 51 81 70 ** ** 87 50 50 87 75 87 87 75 87 37 75 37 62 62 87 87 37 ** 50 50 87 ** ** 37 ** 62 25 87 ** 75 87 ** 87 25 75 ** 62 87 74 ** 57 71 47 19 71 90 85 90 47 9 23 28 14 42 19 14 19 23 47 61 33 23 85 66 52 71 33 14 47 90 57 95 80 76 4 23 90 57 71 51 93 93 ** 93 56 ** 81 ** ** 87 75 56 75 43 81 56 62 56 68 81 ** 75 81 ** 56 87 87 93 87 87 81 81 75 81 81 75 12 93 87 ** 79 ** 12 ** ** 61 ** ** ** 94 ** ** 33 38 61 86 50 55 38 27 38 83 94 44 94 88 ** 77 72 33 72 94 55 55 77 88 33 50 ** 83 ** 74 ** ** 8U ** 70 ** ** ** 50 80 50 70 0 60 50 60 70 40 80 90 70 80 90 ** 90 ** 70 70 40 90 90 ** ** 80 ** 70 ** 60 ** 78 95 75 89 76 55 91 89 90 89 68 58 41 51 37 57 40 36 46 43 40 75 62 41 91 71 68 78 57 31 48 83 66 68 86 69 50 40 88 60 82 65 DISA 4030 ** 80 80 66 73 86 93 93 93 80 26 60 33 66 46 46 73 40 26 53 60 26 46 73 60 66 80 33 20 40 93 20 80 93 73 53 66 93 80 80 64 ** 92 ** 92 69 92 69 ** 92 84 76 61 84 69 92 61 40 61 69 30 84 01 46 ** 84 76 84 69 46 76 92 76 92 92 93 53 61 ** 69 84 77 4)31 ** 76 ** 88 57 84 96 ** 88 88 73 57 80 73 69 73 69 69 ** 65 84 84 96 ** ** 92 69 92 15 80 96 92 80 92 92 50 69 ** 80 92 81 ** ** 87 62 50 81 93 75 68 50 56 18 56 37 37 31 50 50 37 18 62 50 68 75 56 43 50 37 18 18 68 56 50 81 81 43 18 75 68 81 56 4082 96 74 92 80 72 85 87 90 92 63 56 52 61 27 45 36 49 69 65 36 85 70 65 78 78 72 78 60 14 38 78 50 63 87 81 41 60 87 70 83 67 97 77 88 75 64 93 86 84 86 71 86 64 37 7, 66 53 62 51 55 57 80 66 44 68 73 71 64 48 42 37 95 66 73 88 82 68 62 91 82 84 71 95 71 ** 76 38 ** 85 85 95 90 52 52 38 47 66 38 28 47 28 23 61 38 9 95 61 71 76 47 19 38 95 71 57 90 76 66 38 90 52 85 62 96 83 96 85 56 90 93 88 98 76 35 20 36 38 63 33 16 26 35 30 58 53 15 90 80 55 70 35 8 28 81 65 73 73 86 33 46 85 50 78 59 ** 66 7B 75 60 96 87 87 81 72 66 60 42 24 57 48 69 45 66 66 72 60 63 93 72 54 81 84 54 69 78 66 66 81 78 51 27 75 36 57 67 4070 63 72 68 68 27 59 63 63 68 45 27 77 45 22 40 81 36 50 45 18 68 86 18 54 54 45 59 72 22 36 63 18 36 63 27 72 54 77 59 63 52 97 86 95 86 61 97 94 98 94 78 73 67 57 46 78 49 39 73 54 54 86 73 46 93 80 78 83 61 34 46 93 69 68 90 73 68 49 95 54 89 73 94 81 92 68 53 94 90 44 75 53 44 53 44 33 57 55 24 55 40 50 81 53 16 94 77 75 72 83 16 81 85 77 72 83 77 55 31 94 55 74 65 ** 74 81 85 70 92 85 ** 98 81 55 40 44 33 40 33 25 22 44 37 59 37 25 92 74 74 88 62 22 25 81 77 51 88 74 44 40 88 66 85 62 ** 81 ** 81 81 ** ** 93 ** 68 87 56 43 31 87 43 18 43 68 56 87 81 18 93 87 87 81 75 56 68 93 37 62 97 93 56 62 93 62 93 73 95 69 82 82 73 91 86 ** 86 ** 69 56 78 69 56 ** 78 65 78 43 86 86 73 78 82 73 86 60 43 73 91 78 82 82 52 56 65 86 34 69 75 ** 57 94 52 31 89 89 ** 89 73 15 5 15 15 57 5 15 5 10 31 57 52 26 84 73 68 57 63 63 84 94 ** ** ** 89 89 84 ** 89 89 63 96 78 90 78 59 90 88 91 88 72 57 51 49 43 60 48 +2 51 52 44 75 62 41 87 76 69 74 61 28 50 86 65 69 85 77 55 50 89 61 80 67 DISB ** ** ** 80 25 ** ** 95 95 85 90 95 90 80 40 70 65 85 80 85 85 90 85 95 85 85 05 55 50 50 90 55 50 85 ** 90 75 ** 0 ** 79 4251 91 73 97 71 67 97 95 91 9' 80 56 23 47 52 58 19 30 34 39 19 84 60 50 97 67 65 89 56 21 26 82 34 69 80 69 32 36 89 69 91 63 95 35 70 30 30 56 75 ** ** 70 60 10 50 15 40 20 25 20 35 25 50 60 5 ** 75 75 30 70 10 40 80 60 70 90 55 40 15 ** 45 55 53 ** 40 85 70 59 92 74 70 77 44 18 3 33 29 22 3 33 18 25 0 70 62 14 74 51 59 55 29 7 18 74 51 59 81 40 25 22 88 48 44 47 4140 96 70 87 67 51 87 83 90 93 83 51 45 32 35 48 54 38 38 32 70 64 54 64 90 80 64 67 77 51 58 96 74 70 77 64 32 51 93 58 87 66 4150 ** 86 98 86 70 98 80 84 88 66 43 52 60 37 60 50 47 62 68 54 66 76 25 94 92 68 36 70 43 41 90 66 70 86 72 56 49 90 56 92 69 93 58 88 71 31 90 85 87 85 57 37 11 33 35 27 23 41 33 17 21 52 45 23 87 52 57 66 35 3 15 78 60 52 87 56 10 23 85 52 78 51 98 77 89 80 32 91 87 93 89 79 40 37 40 30 65 36 44 40 33 19 60 62 39 87 74 68 65 46 9 39 88 51 51 88 47 37 29 91 58 86 59 4350 95 86 95 ** 56 95 11 91 73 65 30 60 65 60 73 52 82 30 52 30 47 82 17 95 78 78 91 52 21 47 91 78 ** ** 95 82 43 86 69 ** 71 4390 ** 8U 86 86 73 ** 93 93 ** 8U 40 20 66 53 60 06 40 53 26 66 ** 20 40 86 86 93 93 73 13 36 ** 26 93 93 93 26 93 93 53 93 71 96 81 91 69 74 90 77 91 10 74 90 51 48 37 68 41 56 51 54 26 72 65 43 93 76 74 80 69 25 54 87 67 80 91 92 71 58 87 58 86 69 96 83 92 77 7 85 65 96 88 70 29 77 88 59 66 92 40 74 51 33 85 ** 3 92 74 81 66 37 11 25 ** 51 85 74 88 0 59 92 55 92 67 ** 50 91 50 25 75 91 ** 83 53 0 8 33 16 16 25 8 16 41 25 91 66 41 58 58 58 75 25 0 25 ** 83 8 75 58 8 41 83 41 ** 50



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952 HATH LEVE 5 TECK5305 11/07/d6
PEFCENTAGE OF CORRECT ANSWERS PER 17EM
NOTE 100 PERCENT ON A PARTICULAR 17EM 15 INDICATED BY **

SCHL 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL ** ** ** ** ** 42 ** ** ** 42 64 28 57 42 78 78 71 57 42 47 78 92 28 ** 85 85 ** 64 50 71 ** 64 85 92 ** 50 71 ** 57 ** 78 . 16 18 92 82 70 90 90 98 89 77 55 51 57 47 68 52 44 58 70 44 80 65 41 90 83 75 80 69 65 65 54 71 88 74 54 48 86 64 81 70 4120 95 00 90 71 71 ** 75 85 ** 80 61 61 76 61 85 57 52 66 57 47 ** 76 80 90 90 61 90 80 0 61 90 52 80 ** 95 80 57 90 76 80 75 4121 ** 81 ** 72 81 ** 90 ** 90 72 45 36 72 63 45 54 63 18 18 27 54 54 36 81 81 54 72 45 54 18 ** 63 45 90 45 27 27 ** 63 90 63 96 80 ** 83 40 90 83 90 93 83 40 6 40 43 63 33 36 20 10 16 93 16 23 93 80 76 93 40 6 36 86 53 50 83 76 23 50 86 76 90 59 88 47 82 58 41 94 82 68 ** 70 23 5 41 41 47 58 52 52 29 23 70 58 11 70 70 47 70 41 29 23 88 64 35 76 64 29 29 88 64 82 56 4* 84 97 76 53 92 ** 89 82 76 61 46 69 43 71 64 70 58 69 96 7) 76 33 82 89 71 84 64 2 48 92 84 92 94 84 43 61 92 43 69 11 4592 ** ** ** 75 75 ** ** ** ** ** 75 25 75 75 ** 15 50 25 75 50 °* 50 25 ** ** 50 ** ** 0 75 ** ** ** 75 ** 50 ** ** 50 ** 78 98 93 91 91 85 98 97 96 97 92 82 73 76 73 84 75 65 66 60 57 85 61 56 89 91 83 74 70 20 60 80 53 52 82 73 33 35 87 61 83 75 96 76 92 77 56 92 88 91 90 75 50 41 54 45 60 47 48 48 45 36 73 63 38 89 76 71 76 58 24 44 87 58 66 86 72 41 44 89 57 84 65 ** 75 93 87 65 90 90 87 90 68 59 50 46 53 65 31 56 37 34 34 81 68 53 78 84 65 87 68 31 46 84 37 65 ** 62 65 18 87 56 87 66 ** 9U 94 84 7U 98 94 88 88 82 78 64 66 52 U4 5U U4 6U 64 65 82 74 47 94 88 78 76 78 56 64 88 82 78 88 84 49 64 86 7U 86 75 93 /7 81 75 63 81 86 93 95 84 47 29 50 40 59 50 34 45 29 59 75 45 36 93 84 81 86 61 45 54 95 52 56 81 70 29 52 95 75 81 65 ** 62 87 62 31 87 93 81 93 56 12 18 0 12 18 12 0 37 6 6 43 25 6 81 81 68 87 62 12 31 ** 62 37 75 81 18 25 93 43 93 50 95 65 81 78 29 87 78 85 88 63 30 28 27 21 47 24 16 27 43 9 55 41 30 84 61 60 77 29 5 22 81 50 51 90 63 14 29 85 50 78 52 94 82 87 78 47 88 92 94 95 85 59 32 48 40 56 44 33 38 40 33 65 57 13 88 84 77 76 69 22 47 88 67 68 81 65 52 41 94 64 88 64 94 85 76 73 61 85 97 ** 97 91 61 47 64 32 55 41 55 47 47 58 70 64 35 91 91 79 88 64 41 61 97 73 79 97 94 47 67 ** 73 97 72 ** 58 ** 82 41 82 94 ** 94 88 58 47 64 47 76 70 >8 35 52 23 82 7U 64 82 ** 68 ** 64 52 58 94 64 52 94 47 76 35 94 70 88 71 16 16 18 62 45 88 80 90 84 10 54 39 39 47 60 33 00 39 35 19 62 43 25 90 60 58 78 35 23 27 76 54 33 82 72 27 52 78 54 80 58 4322 ** 56 81 15 50 68 81 93 81 68 81 62 50 25 62 37 62 37 50 37 50 81 31 87 62 50 81 43 6 31 75 75 43 87 75 25 37 93 43 75 61 ** ** 71 66 23 95 80 95 ** 57 19 14 42 19 47 33 9 23 33 9 61 66 4 90 71 61 38 47 9 19 ** 76 52 85 80 38 47 ** 52 95 56 ** 56 92 52 24 96 96 96 ** 64 8 8 37 48 48 24 76 20 40 24 52 44 36 92 68 64 88 4 12 84 72 40 84 56 64 36 96 44 96 57 96 16 85 75 47 88 88 92 92 75 50 36 44 37 55 38 42 38 41 30 65 55 29 88 17 70 79 55 25 40 87 62 58 86 70 40 43 90 61 86 62 4153 ** 44 ** 82 70 88 94 94 94 82 82 88 70 64 64 41 35 64 70 52 82 94 52 94 76 82 58 41 17 64 ** 23 52 94 82 11 29 94 70 ** 71 4061 93 90 88 81 65 90 88 93 90 74 60 30 58 39 67 46 48 55 20 18 74 55 25 97 79 79 62 46 11 39 93 62 72 90 67 48 41 86 76 86 65 4113 ** 78 95 52 30 82 91 95 91 86 65 69 60 52 39 56 73 69 73 91 86 73 52 95 69 65 82 65 21 56 91 78 ** 78 86 78 39 91 69 86 73 4210 ** 75 87 67 67 95 90 90 95 75 77 35 35 32 72 30 12 35 27 25 97 75 27 92 82 67 82 57 15 35 92 67 75 87 70 50 27 90 67 87 64 99 70 90 78 54 92 91 95 94 78 56 40 53 39 64 42 37 47 41 37 65 64 35 93 74 78 87 64 20 47 86 67 73 90 70 52 42 93 52 75 66 97 61 82 80 65 85 91 ** 97 74 71 51 54 48 54 65 45 54 62 17 74 77 37 91 74 71 80 62 28 51 91 65 77 91 94 51 42 97 60 94 70 ** 78 68 50 89 92 92 89 63 44 39 28 13 50 47 13 42 42 52 71 47 21 94 76 76 97 52 39 42 89 52 71 94 68 47 50 86 76 84 62 4410 97 65 34 85 60 92 85 98 94 85 71 76 57 55 59 49 40 44 56 50 56 59 56 85 85 85 86 46 10 53 88 66 72 86 84 56 69 92 66 88 70 96 81 90 68 56 93 93 89 90 75 35 41 51 35 60 46 45 49 28 46 82 65 45 88 72 73 72 61 30 54 85 62 65 84 78 46 44 88 61 78 65 96 75 93 82 50 92 89 89 86 70 46 50 37 40 60 52 62 30 50 26 85 60 18 91 69 74 73 64 21 43 69 59 51 86 74 37 46 91 68 91 64 DICE 97 80 90 75 56 91 90 93 92 76 56 28 49 41 60 45 42 47 47 39 75 64 36 91 75 73 79 58 21 48 86 63 69 88 76 48 45 91 64 84 66 DISA 95 75 89 76 55 91 87 90 09 68 51 41 51 37 57 40 36 46 41 40 75 62 41 91 71 68 78 57 31 48 83 66 68 86 69 50 40 88 60 82 65 96 78 90 78 59 90 88 91 88 72 57 51 49 43 63 48 42 51 52 44 75 62 41 87 76 69 74 61 28 50 86 65 69 85 77 55 50 89 61 80 67 90 70 92 77 50 97 88 91 90 75 50 41 54 45 00 47 48 48 45 30 73 63 38 69 76 71 76 58 24 44 87 58 66 86 72 41 44 89 57 84 65 96 76 85 75 47 88 88 92 92 75 50 36 44 37 55 38 42 38 41 30 65 55 29 88 77 70 79 55 25 40 87 62 58 86 70 40 43 90 61 86 62 0151 97 80 90 76 56 91 90 93 92 76 56 79 49 11 50 45 42 47 47 39 75 64 36 91 75 73 79 58 21 48 86 63 69 88 76 48 45 91 64 84 66 Stut 96 77 90 76 55 91 89 91 90 73 54 43 50 42 59 44 43 46 46 38 73 61 37 89 75 70 77 58 20 46 86 62 66 80 73 46 44 90 00 83 65



INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Numbers/Numeration (4 items), Computation (5 items), Fractions (10 items), Decimals/Percents (9 items), Measurement (4 items), Geometry (4 items), and Estimating/Graphs (4 items).

The population includes all students enrolled in grade 6 who took an on-level test and for whom valid answer sheets were turned in.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 57%. Generally, students appear to be mastering the objectives in the subtests of Numbers/Numeration and Computation, but there are isolated objectives in the strands of Decimals/Percents, Mesurement, Geometry, and Estimating/Graphs that a significant percentage of students are not mastering. Within the Decimals/Fractions strand, students are having difficulty with arranging decimals in order of size, changing common cactions with terminating decimals, and finding the percent of a whole number. Within Measurement students are not mastering the objectives concerned with renaming improper English and Metric linear measures. In Geometry the difficulty lies with finding perimeters and identifying terms dealing with lines. In Estimating/Graphs only 38% of the students are able to obtain information from a table or schedule or from bar, line, or circle graphs.

The most severe deficits as a strand lie in Fractions where of 10 items, there are eight that fewer than 60% of the students answered correctly. The objectives measured by these items are adding, subtracting, dividing, and multiplying common and mixed fractions.



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DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL MATHEMATICS - LEVEL 6

1985 - 1986

A.5	Arranging integers in order	_	
A.8	Identifying nos. divisible by 2,3,4, etc. and odd or even	2	1
A.3	identifying place value to the billions place	2 3	
A.11	Writing exponents in words and vice-versa	2	1
B.3	Multiplying 4-digit nos, by 3-digit nos wert or hower	5	
B.4	Dividing 4-digit hos. by 2-digit hos	<u>ي</u> د	
B.7	Finding the average of a set of 2-digit nos: word prob	5 7	
D.9	writing fractions and mixed nos.	8	
B.10	Solving computations with 2 exponents to the nower	9	1 1
C.15	SOLVING One and two-sten word problems	0-]
B.17	Solving one and two-step word nrohlems		1 1
C.5	Add and Subtract Common fractions with unlike denoma	12 -	1 1
C.6	riming a iractional part of a large number	2 -]]
C.7	Adding mixed nos. With like denomed regrouping		I i
C.8	Subtracting mixed nos. With like denous . regrouping	S =	
C.9	Aud and Subtract mixed hos, with unlike denome, no regroup	6 –	
C.10	Multiplying 2 or 3 common or mixed fractions, or whole no.	71	1 1
C.10		œ –	1 1
C.11	Dividing common or mixed fractions or whole nos.	9	1 1
C.13	Solving ration and proportion problems	2	l 1
D.1	writing mixed decimals in words to the ten thousandths	2	i 1
D.3 D.6	Autoux11以 OCCIMP15 in Order of cite	2	1
D. 7	Add and subtract decimals and mixed decimals w/diff. nos.	3 2	!!
υ.7 υ.3	Multiplying decimals with 2-digit multipliers	2	i i
D. 10	Dividing decimals with 1-digit divisors	5	i i
D.10 D.12	Changing common fractions with terminating decimals	6	1 1
D.12 D.17	Changing decimals to the hundredths place to percents	2	i i
E. 2	Finding the percent of a whole number	8	i ì
E.10	Renaming improper measures of time with two measures	2	i i
E.6	Knowing an approximate Celsius temperature reading	03	į į
E.6	Renaming improper English and metric linear measures	н 3	!!
F.6	Identificing ten tru dimension a se	3	
F.11	Identifying ten two-dimensional figures	ωω	
F.1	Finding the perimeter of a square, rectangle or triangle	W 4	j 1
F.14	Identifying terms dealing with lines given map or drawing	53	
G.1	Identifying center, diameter, radius, chord & circumference	6	
G.4	Rounding off whole numbers to any place	3	
G.8	Identifying probablility in word problems	3 3	
G.5	Getting information from a table or sched e	3	
0.5	Using picture, bar, line and circle gards	0 4	•



962 MATH LIVE 6 TECR5005 11/07/80
PERCENTAGE OF CURRECT AJSWERS PER LIEM
NOTE 100 PERCENT UN A PARTICULAR ETEM IS INDICATED BY **

SCHL 1 2 3 4 5 6 7 8 9 10 11 12 13 14 12 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL 2130 47 48 80 76 73 81 55 43 49 53 68 52 52 53 37 74 59 49 46 46 60 35 58 81 50 30 76 52 72 22 61 44 60 50 52 50 58 34 34 74 55 2170 66 74 86 90 73 85 73 55 39 66 63 50 45 46 41 63 93 51 54 55 62 21 48 64 44 34 70 43 80 24 63 42 49 49 48 46 65 33 33 73 55 4570 25 62 70 96 85 88 37 29 33 55 66 37 25 25 31 74 57 55 18 25 37 7 29 62 44 14 70 29 81 29 55 29 37 40 59 29 55 22 40 62 45 2060 73 08 73 89 94 89 68 42 65 73 78 42 05 50 47 70 50 08 57 71 57 57 71 65 60 47 60 55 78 50 08 55 71 65 60 42 57 50 39 84 63 2370 43 64 77 87 76 85 67 53 45 12 63 53 54 48 43 72 44 43 44 42 59 26 39 70 56 26 81 40 76 22 54 39 56 49 53 46 52 37 27 65 54 2240 43 45 76 88 58 75 50 26 47 58 52 33 36 25 25 51 37 48 27 34 37 12 41 51 38 5 55 45 68 19 37 41 54 43 52 43 45 25 29 68 43 50 65 79 86 74 83 60 46 46 65 64 48 45 45 39 68 46 49 44 46 56 27 47 69 50 27 73 45 75 24 57 42 55 49 52 45 56 34 31 70 53 53 55 68 86 66 82 62 64 44 68 60 46 60 53 23 71 51 60 57 48 44 24 60 60 46 17 77 66 75 15 51 26 68 48 46 53 42 11 33 64 53 44 44 66 73 58 64 50 35 35 51 53 30 33 26 22 53 29 42 14 34 37 17 32 33 25 12 53 32 57 21 47 38 51 47 46 38 47 38 23 56 40 2143 79 88 94 91 90 94 90 58 47 84 75 69 64 59 53 84 64 62 42 60 65 36 67 64 56 39 74 50 84 36 72 61 68 68 62 70 66 51 54 76 66 59 73 87 90 78 81 77 69 52 64 58 66 66 56 54 82 63 50 53 52 66 20 55 75 60 66 75 53 77 40 65 63 78 65 56 75 61 33 34 76 63 84 70 85 96 64 82 79 72 76 79 69 59 66 69 73 73 64 74 64 57 81 73 71 78 75 47 73 73 79 77 67 58 72 82 67 70 71 54 45 79 71 68 69 83 89 72 82 75 60 54 72 65 56 59 55 51 74 56 61 46 52 63 39 59 64 56 40 70 55 76 44 63 54 68 66 58 64 61 43 40 72 61 15 14 82 87 81 88 75 48 57 63 68 53 55 51 51 75 55 53 52 47 61 34 56 63 53 26 64 48 76 21 58 46 60 60 55 60 57 45 42 77 59 65 37 86 95 86 88 84 75 61 72 79 61 59 57 53 77 56 55 29 53 71 36 59 55 52 39 76 42 81 24 57 43 44 54 48 55 56 31 45 77 61 57 02 75 88 74 81 66 50 46 50 48 50 57 54 39 76 41 39 42 35 63 35 38 61 43 25 80 55 72 68 53 33 79 49 51 43 66 40 31 71 54 67 68 79 96 59 79 64 62 52 71 56 42 58 36 34 56 52 53 29 45 60 26 47 47 48 17 84 32 79 42 75 52 73 63 41 53 67 42 28 78 55 51 70 82 87 69 85 65 54 46 61 69 60 45 56 42 73 51 46 45 45 66 13 51 64 55 21 63 44 78 24 60 46 51 60 49 32 51 29 34 80 54 85 84 84 ** 83 83 84 51 77 77 56 81 66 38 34 69 36 62 51 31 72 44 56 68 32 39 77 59 78 46 60 57 59 68 65 44 40 36 61 81 62 66 73 81 90 76 84 72 55 55 54 64 57 55 50 44 72 49 50 44 43 65 31 51 60 48 27 72 47 77 35 59 45 61 58 52 49 57 38 40 77 57 70 75 89 91 83 86 68 61 48 65 59 59 57 56 59 72 53 68 46 53 67 33 72 74 59 28 66 50 75 25 72 43 75 46 68 63 68 38 35 84 61 54 65 62 83 80 85 61 48 47 62 61 45 47 39 28 71 42 52 36 48 57 33 46 57 38 28 67 35 79 24 64 49 39 51 51 47 54 30 33 68 52 70 74 87 93 78 84 73 47 53 63 71 58 49 55 49 67 51 50 32 49 58 36 49 61 56 28 78 47 84 42 71 49 68 55 70 44 70 35 42 74 59 65 72 86 89 80 85 68 51 49 63 65 54 50 50 45 70 49 55 37 50 60 34 54 63 51 28 71 44 80 32 69 48 60 51 63 50 64 34 37 75 57 2100 46 68 72 83 67 76 57 40 62 55 42 47 34 36 50 34 35 32 51 53 16 42 42 32 18 59 37 64 19 48 42 36 63 48 44 55 37 40 60 48 51 62 75 81 72 84 60 38 20 54 53 38 25 25 34 51 28 39 28 38 49 12 42 44 26 8 50 18 71 25 50 26 50 39 49 19 47 33 45 72 43 90 75 88 96 81 84 86 69 65 82 77 73 65 50 63 81 57 63 67 60 79 30 66 83 75 38 68 52 86 36 76 59 74 75 66 65 76 50 57 86 69 4360 76 88 90 93 79 80 90 55 58 61 52 58 52 46 46 69 39 66 38 49 57 22 44 46 34 22 53 31 77 28 68 44 58 68 52 57 65 36 19 69 56 DISE 65 72 80 88 74 81 74 52 44 65 60 52 46 39 45 62 40 49 41 49 62 21 49 55 42 21 58 35 74 27 60 42 59 60 54 45 58 39 43 72 54 DISA 50 65 79 86 74 83 60 46 46 65 64 48 49 45 39 68 48 49 44 46 56 27 47 69 50 27 73 45 75 24 57 42 55 49 52 45 56 34 31 70 53 0158 68 69 83 89 72 82 75 60 54 72 65 56 59 55 51 74 56 61 46 52 63 39 59 64 56 40 70 55 76 44 63 54 68 66 58 64 61 43 40 72 61 015C 66 73 81 90 76 84 72 55 55 64 64 57 55 50 44 72 49 50 44 43 65 31 51 60 48 27 72 47 77 35 59 45 61 58 52 49 57 38 40 77 57 0150 65 72 86 89 80 85 68 51 49 63 65 54 50 50 +5 70 49 55 37 50 60 34 54 63 51 28 71 44 80 32 69 48 60 51 63 50 64 34 37 75 57 DISE 65 72 80 88 74 81 74 52 44 65 60 52 46 39 4 62 40 49 41 49 62 21 49 55 42 21 58 35 74 27 60 42 59 60 54 45 58 39 43 72 54 STUT 62 70 82 88 75 83 70 53 50 66 64 54 53 49 44 70 49 53 43 47 61 31 52 62 50 29 70 46 76 33 61 40 61 57 55 51 59 38 38 73 57

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Numbers/Numeration (5 items), Computation (6 items), Fractions (7 items), Decimals/Percents (9 items), Measurement (3 items), Geometry (5 items), and Estimating/Graphs (5 items).

The population includes all students enrolled in grade 6 who took an on-level test and for whom valid answer sheets were turned in.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 54%. Generally, students appear to be mastering the objectives in the subtests of Numbers/Numeration and Computation and most of the objectives tapped in Estimating/Graphs. However, within these subtests there are isolated objectives on which students are doing poorly. These objectives involve identifying the missing information needed to solve word problems, estimating answers to word problems by rounding off, and getting distance information from a scale drawing.

In the strands of Fractions, Decimals/Percents, Measurement, and Geometry there appear to be severe deficits. In Fractions out of seven items, there are six in which students performed very poorly. The objectives covered by these items include subtracting, multiplying, and dividing common fractions or mixed or whole numbers, solving ratio and proportion problems, and solving one and two-step word problems involving fractions. In Decimals/Percents performance on all nine items was poor. tives measured were writing fractions as decimals and its inverse, finding a fractional part of a whole number, identifying decimal place value, and adding and subtracting decimals and mixed decimals and whole numbers. In Measurement most students are unable to calculate elapsed time given two points in time and do not know approximate Celsius temperature reading. In Geometry performance on all five items was poor. The objectives measured were identifying the perimeter and area of figures, and identifying geometric terminology.

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL MATHEMATICS - LEVEL 7

1985 - 1986

A.1	Writing numerals to the hundred trillions place	1	
A.3	Identifying place value to the trillions place	2	
A.5	Arranging any integers in order	3	
A.8	Identifying nos. divisible by 2, 3, 4, etc. & odd and even	4	
B.10	Solving probs. with 2 or 3 exponents up to the 5th power	5	
A.11	Expressing exponents in words and vice-versa	6	
B.1	Adding nos. with up to 7 digits; vert or horiz	7	
B.2	Subtracting nos. with up to 8 digits; vert. or horiz.	∞	
B.3	Multiplying 5-digit by 3-digit nos.; vert. or horiz.	9	
D.10	Writing fractions and mixed fractions as decimals	0	
D.14	Changing common fractions to percents	1	
B.16	Identifying the missing info. needed to solve word prob.	1 2	
C.14	Solving one and two-step word probs. with fractions	3	1
C.6	Finding a fractional part of a large number	1	
E.9	Knowledge of boiling & freezing points of water & body temp	1	
C.8	Subtracting mixed nos. with unlike denoms.; regrouping	6	
C.9	Multiplying 2 or 3 common fractions or mixed or whole nos.	1 7	
C.10	Dividing common fractions or mixed or whole nos.	8 –	
C.12	Solving ratio and proportion problems	1	
D.1	Writing mixed decimals to the millionth place as nos.	2	
D.2	Identifying decimal place value to the millionths place	2	
D.6	Add and subtract decis. & mixed decis. & whole numbers	2	
F.8	Identifying polygons with up to twelve sides	3	
D.8	Dividing decis., mixed decis. and whole nos. w/2-dig. divis	.42	
D.12	Changing decimals to the thousandths place and mixed to \$	5	
D.9	Dividing by 10, 100 or 1000 by moving the decimal point	2	
D.11	Changing any common fraction to a decimal	2	
D.16	Finding the \$ of a whole no. or mixed decimal	8	
E.1	Calculating elapsed time given two points in time	9	
E.4	Interpreting and writing dates in numerical form	3	
E.10	Knowing an approximate Celsius temperature reading	3	
F.3	Identifying a ray, vertex, angle & bisector of an angle	23	
F.13	Finding the perimeter of any figure given a word problem	2 2	
F.15	Finding the area of any triangle, parallelogram or trapez.	24	
F.16	Identifying center, diameter, radius, chord, arc, etc.	5 3	
· G.2	Rounding off decimals or mixed decimals to any place	6	i
G.3	Estimating answers to word probs. by rounding off	7	
G.4	Identifying probablility in word problems	æ ∪	· •
G.6	Using picture, bar, line, & circle graphs with multiples	93.	I
G.10	Getting distance info. 'm a map or scale drawing	40	1
			1



972 MATH LEVE 7 TECK 5005 11/07/86
PEKCENTAGE OF LORRECT ANSWERS PER LIEM
NOTE 100 PEKCENT ON A PARTICULAR LIEM IS INDICATED BY **

SCHE 1 2 3 4 5 6 7 8 7 10 11 12 13 14 15 16 17 10 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 36 39 40 TUTAL 2130 83 42 62 92 53 85 83 80 77 51 46 44 41 38 44 47 51 52 79 44 31 59 93 11 36 31 44 25 30 81 18 40 34 29 55 57 33 77 66 16 52 2170 85 58 65 93 57 92 91 88 80 49 46 55 39 51 38 29 46 57 91 55 39 61 89 11 36 51 52 27 38 90 25 21 29 44 50 58 34 77 80 24 55 4570 90 57 38 85 38 95 95 85 95 14 38 57 14 42 23 33 19 42 76 61 19 42 90 9 57 33 23 19 38 90 9 28 9 42 57 57 28 80 66 14 48 2060 83 54 51 89 37 91 83 83 75 45 24 37 21 48 5 18 37 45 81 37 21 56 89 10 18 29 24 18 40 86 13 24 32 29 16 54 37 62 83 8 45 2370 85 47 60 91 57 90 91 81 78 56 42 51 50 48 34 46 51 67 85 47 36 57 78 15 43 27 48 27 31 76 24 25 27 27 44 58 24 51 54 14 51 2240 82 58 41 85 37 90 83 80 69 35 35 46 38 45 16 25 32 43 80 33 27 45 79 3 6 33 37 19 32 83 6 17 33 20 27 48 20 67 54 16 43 DISA 84 51 58 90 51 90 88 84 78 48 41 49 40 46 33 37 45 56 89 46 33 56 85 11 34 35 44 25 35 83 19 27 30 32 5 56 29 68 66 17 51 2110 85 65 72 95 57 93 89 89 70 57 34 42 59 38 34 55 40 51 72 46 23 63 89 12 29 38 51 23 27 89 29 31 36 51 68 48 61 65 17 53 2120 60 53 45 83 50 83 67 68 53 40 41 50 27 40 38 43 57 56 70 37 28 36 61 17 30 35 50 53 43 62 30 27 36 41 48 63 40 60 65 47 48 2140 80 57 74 90 68 95 86 86 79 63 51 62 49 50 35 39 55 52 79 51 37 66 85 21 38 48 48 37 52 73 24 42 35 39 52 68 49 71 70 35 57 2200 87 39 65 89 39 93 81 87 75 43 43 62 45 32 21 34 43 68 85 51 15 57 87 7 34 31 53 15 29 89 14 39 37 23 21 59 29 76 54 7 49 2950 87 69 91 94 84 92 95 41 74 75 50 50 65 59 58 74 76 77 88 68 70 91 93 21 58 35 86 27 38 87 59 58 51 52 68 75 50 88 75 24 68 DISB 80 58 71 90 63 92 84 84 71 58 46 55 49 47 40 50 58 62 80 52 39 65 83 17 40 38 59 33 40 79 34 42 39 40 51 68 44 73 67 28 57 2330 88 62 64 93 54 96 88 84 73 61 37 48 47 47 34 39 52 62 84 56 45 65 87 18 37 51 40 22 40 85 17 32 39 32 55 73 26 77 66 16 55 2080 86 54 50 94 23 91 96 86 79 40 38 40 49 35 15 42 45 52 83 47 28 59 89 16 20 25 35 25 47 86 25 22 27 20 13 62 35 79 67 16 49 2180 85 58 60 90 49 91 88 82 76 60 48 61 47 59 45 60 54 66 86 58 50 70 84 35 58 49 65 44 56 87 40 49 46 44 54 68 48 76 76 40 62 2390 83 64 55 94 48 94 91 88 73 57 46 55 47 48 46 42 40 57 86 55 42 70 91 14 39 38 40 25 39 89 19 53 36 29 44 76 23 73 57 13 54 2190 83 70 69 94 67 97 86 87 77 50 38 68 52 48 39 39 46 50 86 54 44 63 94 9 48 43 53 33 52 88 12 33 51 38 36 64 46 75 79 17 57 2260 30 38 53 92 36 92 90 83 77 43 27 43 36 33 17 23 25 30 92 33 28 58 82 7 7 26 41 20 40 86 11 20 26 11 23 61 28 71 67 10 44 DISC 85 59 60 93 49 94 89 85 75 54 39 53 47 47 34 41 45 55 86 52 42 65 88 18 37 42 46 28 45 86 21 36 39 31 42 68 34 75 69 19 54 2310 93 05 86 94 58 97 93 95 83 66 48 54 65 62 50 53 62 69 86 70 53 30 89 22 50 39 70 41 50 90 21 40 51 51 64 80 60 76 78 33 65 2040 83 40 29 85 30 86 85 88 71 41 42 38 46 29 36 22 13 47 78 56 38 53 89 14 40 32 42 22 34 82 25 33 33 21 46 52 31 66 63 15 47 2050 93 69 81 93 65 97 93 92 82 46 36 47 51 46 50 54 54 67 90 51 50 65 96 10 55 31 69 21 52 88 16 28 38 39 39 71 43 73 62 16 58 DISD 90 62 69 91 53 94 91 92 19 51 42 47 54 47 46 45 46 62 80 59 48 67 92 15 49 34 62 28 40 87 '0 33 41 38 49 69 45 72 67 22 57 1240 82 55 65 95 40 93 87 83 71 41 23 49 31 47 27 25 29 41 82 39 21 45 90 13 30 33 39 27 43 92 17 18 22 20 22 60 29 64 64 13 47 2100 77 47 50 87 29 86 80 80 67 51 32 54 41 32 22 25 32 41 77 62 40 57 85 8 34 35 59 28 35 80 14 22 31 25 19 65 36 50 64 10 47 2270 85 03 51 91 58 90 93 82 79 52 43 60 43 57 47 42 42 53 82 54 49 59 88 20 36 39 50 25 46 82 11 33 30 40 46 03 42 72 64 31 55 2980 81 53 60 95 24 95 95 83 73 51 38 53 45 46 21 42 50 53 87 54 33 61 89 4 32 30 39 24 34 84 16 30 42 28 15 56 37 73 69 8 50 DISF 82 56 58 92 39 91 89 82 13 48 35 54 39 46 30 33 31 47 82 51 35 55 88 13 33 34 46 26 40 85 15 25 30 28 26 61 35 66 65 16 50 DISA 84 51 58 90 51 90 88 84 78 48 41 49 40 40 33 37 45 56 84 40 33 56 85 11 34 35 44 25 35 83 19 27 30 32 45 56 29 68 66 17 51 DISB 80 58 71 90 63 92 84 84 71 58 40 55 49 47 40 5J 58 62 80 52 39 65 83 17 40 3J 59 35 4J 79 34 42 39 40 51 68 44 73 67 28 57 DISC 85 59 60 93 49 94 89 85 75 54 39 53 47 47 34 41 47 55 86 52 42 65 88 18 37 42 46 28 45 86 21 36 39 31 42 68 34 75 69 19 54 DISD 90 62 69 91 53 94 91 92 79 51 42 47 54 47 46 45 *6 62 86 59 48 67 92 15 49 34 62 28 46 87 20 33 41 38 49 69 45 72 67 22 57 DISE 82 56 50 92 39 91 89 82 73 48 35 54 39 40 30 33 37 47 82 51 35 55 88 13 33 34 46 26 40 85 15 25 30 28 26 61 35 66 65 16 50 STOT 84 57 63 91 51 92 88 85 75 52 41 52 46 46 30 41 40 50 83 52 39 02 87 15 38 37 51 28 41 84 22 33 36 33 42 64 37 71 67 20 54



INSTRUMENT AND POPULATION DESCRIPTION

This is a fifty-nine item multiple choice test developed by the State Department of Education and mandated for grade 8 students. Since it broadly correlates with the curriculum objectives and in the interest of limiting testing, the instrument serves as both the final exam for grade 8 students and the State Basic Skills Test.

The population includes all grade 8 students who were eligible to take the State Basic Skills Test in Mathematics.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 58%. Since the test was developed outside the system, the test is not divided into domains as is the case with locally developed tests; however, for analysis individual items were categorized according to the domains in the curriculum guide. Generally, students appear to have mastered the items that could be described as being in the strands of Numbers/Numeration and Fractions and most of the items tapped in the other strands of Computation, Decimals/Percents, Geometry, Measurement, and Estimating/Graphs. However, within these subtests, there are isolated objectives which are not being mastered by more than fifty percent of the students. Within Computation students are having difficulty with simple formulas. Within the Decimals/Percents students are not mastering using ratio and proportion, using simple interest and discount, and changing a fraction to a decimal. In Geometry the difficulty lies with finding the perimeter and area of various figures (i.e., triangle, square, and rectangle). In Measurement students are unable in large percentages to compute using numbers involving time and temperature. In Estimating/Graphs the difficulty lies with estimating the length, weight/mass, capacity, area, and volume.

These data suggest that although students have obtained mastery of basic skills in many areas, there are selected deficits in each of the domains.



DEPARTMENT OF EDUCATIONAL TESTING

BASIC SKILLS TEST - FORM 7

1985 - 1986

MATHEMATICS - LEVEL 8

Recognize no. symbols, whole nos., frac., decimals, 6 powers of 10	1
	2 3
an appropriate unit of measurement in US customes	4
of measurement in the	5 (
an appropriate highway distances	5 7
Convert common measurements within the same system	8
Compute by using time	9
	1
Compute by using temperature	1 1
3	1 1
Approximate the answer to a computation problem	1 4
	1 5
	1 6
	1 7
	1
	1 2 9 0
Echey .	2
rectang	2 2
First the area of a triengle, square, and rectangle	2 3
ify right angles & parallel, perpen	2 2
those in a street map	2
identity odd and even mambers	2 7
	2
The state of	2 9
Identify the radius, dismeter & center of a circle	3 :
the shape of a square, rectangle.	3 3
and divide whole numbers	3
	3 4
	3 5
	3 6
Interpret a line graph	3 3 7 8
Add, subtract, multiply, and divide whole numbers	3 3
nd subtract mixed m	3 4
iply whole numbers or	4
	4 2
_	4 .
Understand probabilities like weather forecasting or lotteries	4 4
	4 6
	4 7
USE SIMPLE FORMULES	4 8
	4
a mo. in a situation, 1.e.; simple interest, discount	5 0
in situation, i.e.; simple int., discounts	5 1
proportion	5 2
in a situation, i.e.; simple int., discounts	5
	5 !
a war graph. Reft. multiply and divide decimal nos. like momev	5 5 5 6
	5 7
Annual Clarity	5
Tirespies & circle graph	5 9

982 MATH LEVE 8 TECROSUS 11707/80
PERCENTAGE OF CONRECT ANSWERS PER TIEM
NOTE 100 PERCENT ON A PARTICULAR TEM 15 INDICATED BY **

1 2 3 4 5 6 7 8 9 10 11 17 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 SCHL 2130 48 73 65 81 67 89 45 48 32 47 80 29 48 56 80 39 63 50 43 53 55 48 34 39 60 83 70 79 71 75 46 82 89 72 85 94 64 48 92 60 98 90 77 89 81 94 46 46 33 95 82 31 59 52 79 44 64 42 37 51 02 45 37 40 57 87 71 79 73 81 93 91 90 85 81 88 60 59 89 54 ** 65 56 82 86 ** 52 26 17 ** 82 26 17 30 78 34 43 34 21 30 47 00 43 43 39 78 39 82 65 65 82 82 95 91 82 86 69 34 86 52 4570 94 15 75 91 54 89 43 35 13 97 78 32 43 50 89 43 51 40 13 37 48 56 35 43 59 89 43 75 56 89 91 97 94 75 86 91 56 40 94 43 99 49 64 93 45 41 32 96 81 33 44 46 66 44 53 44 29 43 46 43 39 30 39 80 54 70 06 72 90 86 83 65 75 83 62 33 85 47 2070 ** 87 71 92 78 94 54 59 22 98 85 36 49 61 96 56 78 47 29 69 59 50 45 42 61 96 61 82 75 84 91 96 92 89 92 ** 73 50 98 63 98 77 69 87 70 92 47 45 30 96 81 31 48 51 78 44 60 45 33 47 54 47 38 37 52 84 62 78 71 77 92 88 88 76 82 89 65 46 89 53 ** 77 65 97 75 93 56 54 34 ** 88 47 63 45 75 52 54 38 40 47 54 50 40 45 45 88 68 84 75 72 93 90 93 77 81 93 75 43 88 56 ** 91 73 88 77 95 39 45 21 96 61 29 49 56 68 37 51 36 32 49 42 35 30 22 57 69 57 69 62 72 89 90 89 71 78 93 49 54 91 34 2120 96 91 79 93 87 94 51 62 48 94 83 50 62 69 84 60 68 55 54 51 69 54 50 49 60 89 74 87 83 84 93 91 90 79 81 90 73 54 88 60 98 78 64 90 67 95 44 42 21 18 78 30 29 41 19 43 59 50 28 43 53 35 32 22 50 89 76 70 67 82 95 88 89 71 71 90 59 40 89 42 ** 88 90 75 95 47 55 37 98 86 38 67 60 88 49 57 55 39 53 63 62 41 49 69 83 69 81 81 79 89 85 88 83 84 95 68 44 88 61 99 84 76 91 77 95 47 52 33 97 80 39 55 58 80 49 62 49 39 49 58 49 39 38 61 83 69 79 75 79 92 88 89 77 80 92 64 49 89 51 99 85 86 90 78 92 45 47 52 93 78 42 61 61 83 47 63 47 27 49 57 57 30 49 38 91 69 78 78 79 94 88 92 81 82 91 68 43 91 62 97 38 63 83 76 88 38 42 31 90 76 25 33 42 75 37 46 30 25 40 50 31 33 22 40 76 65 81 65 72 85 86 85 77 68 85 63 35 78 53 2380 97 11 61 87 67 90 44 41 32 92 80 24 40 54 76 43 54 43 31 51 55 36 37 27 34 79 71 72 76 68 89 82 87 73 78 87 62 37 82 36 ** 63 66 ^ 80 91 65 50 42 95 81 38 48 53 84 59 58 37 55 52 62 30 24 31 57 82 68 80 70 67 88 82 82 77 71 87 65 51 82 51 98 71 7. _3 75 94 40 42 31 97 81 26 53 56 81 47 62 37 42 51 56 48 39 37 42 81 63 66 69 68 93 88 89 78 89 92 63 46 91 55 ** 67 73 90 71 96 39 28 20 94 90 24 37 41 94 33 45 26 28 32 50 24 33 13 43 64 58 83 77 60 98 88 96 84 73 90 60 54 88 41 98 70 72 88 74 92 47 43 38 93 81 31 48 54 81 46 57 39 35 48 56 41 33 33 41 81 67 76 73 70 91 86 88 78 79 89 64 43 86 50 DISC ** 94 82 94 80 90 49 72 55 99 94 39 71 17 88 65 71 44 50 60 77 65 35 64 61 88 75 88 85 67 91 94 97 91 94 97 82 53 92 79 98 15 74 37 64 94 51 54 34 96 83 31 55 54 86 55 55 40 34 54 62 30 37 27 45 83 65 83 71 63 86 86 92 83 86 95 62 44 85 43 ** 90 82 98 93 96 66 60 56 98 87 54 72 67 91 63 82 57 65 67 80 68 67 53 63 89 81 94 89 77 97 89 92 87 87 94 79 65 92 77 99 87 80 94 81 93 57 63 50 97 88 43 67 67 89 62 71 48 52 61 74 57 48 50 58 87 75 89 83 70 92 90 94 88 89 95 76 56 90 69 99 99 89 98 92 97 65 74 68 99 95 87 76 78 93 67 84 66 56 80 84 83 62 72 78 96 95 97 96 89 97 96 93 87 82 95 83 79 91 81 1310 ** 98 43 98 91 98 62 64 59 ** 96 82 64 78 91 66 82 52 39 70 80 66 44 51 60 93 89 97 94 86 96 97 94 91 85 97 83 75 96 65 ** 72 59 86 66 91 44 45 31 94 90 25 35 46 83 43 58 46 31 50 59 57 35 41 41 74 76 80 73 69 93 84 86 75 73 93 67 45 89 46 2100 95 61 65 67 67 91 50 38 26 88 76 37 45 46 74 43 51 42 19 38 53 22 30 15 56 68 67 74 67 61 89 76 85 77 76 89 64 43 83 48 95 38 45 82 56 87 34 41 27 94 76 24 52 35 73 31 47 40 26 36 49 27 31 20 38 69 67 69 65 67 89 86 84 75 67 84 61 41 82 45 ** 78 94 95 77 94 48 52 38 ** 80 34 57 54 89 47 55 50 31 45 57 52 21 37 58 87 77 87 78 80 97 94 91 85 90 95 77 42 96 54 DISE 99 86 79 94 82 95 57 60 52 97 90 65 62 66 68 57 72 55 41 64 72 63 45 50 63 87 85 90 86 81 95 92 91 85 81 94 77 64 90 65 98 77 69 87 70 92 47 45 30 96 81 31 48 51 78 44 60 45 33 47 54 47 38 37 52 84 62 78 71 77 92 88 88 76 82 89 65 46 89 53 99 84 76 91 77 95 47 52 33 97 80 39 55 58 80 49 62 49 39 49 58 49 39 38 61 83 69 79 75 79 92 88 89 77 80 92 64 49 89 51 0150 98 70 72 88 74 92 47 43 38 93 81 31 48 54 81 46 57 39 35 48 56 41 33 33 41 81 67 76 73 70 91 86 88 78 79 89 64 43 86 50 DISD 99 87 80 94 81 93 57 63 50 97 88 43 67 67 89 62 71 48 52 61 74 57 48 50 58 87 75 89 83 70 92 90 94 88 89 95 76 56 90 69 0156 99 86 79 94 82 95 57 60 52 97 90 65 62 66 88 57 72 55 41 64 72 63 45 50 63 87 85 90 80 81 95 92 91 85 81 94 77 64 90 65 SIUT 99 41 75 91 77 94 51 53 41 96 85 44 56 59 83 51 65 46 39 55 63 52 41 42 55 85 73 83 78 76 93 89 90 81 81 92 70 53 89 58





HIGH SCHOOL MATHEMATICS



GENERAL MATHEMATICS

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring the circled objectives in the curriculum strands of Numbers/Numeration (3 items), Computation (8 items), Fractions (6 items), Decimals/Percents (6 items), Measurement (5 items), Geometry (10 items), Estimating/Graphs (2 items).

The population includes all high school students (with the exception of the exam schools) who took the General Mathematics course and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 50%. Generally, students appear to be mastering the objectives in the Estimating/Graphs domain and most of the items in the Numbers/Numeration domain. However, in the Computation domain, out of eight items there were four items which han 50% of the students answered correctly. The objectives d by these items were: finding the average of whole numbers .cimals; knowing the order of operations; writing number senand tences for word sentences; and solving a simple equation with one variable and one operation. In Fractions the difficulty lies with multiplying fractions and solving one and two-step problems involving fractions. Within the Measurement domain students are having difficulty with performing two-step conversions between units of time, and performing two-step conversions within English and metric measures.

The most severe deficits as strands lie in the domains of Decimals/Percents and Geometry. All six items measuring objectives in Decimals/Percents were answered correctly by fewer than fifty percent of the students. The objectives covered were changing fractions to decimals and decimals to fractions, finding the percent of a given number, and solving one and two-step wor lems involving decimals and percents. Of the ten Geometry lems there were seven that were answered correctly by fewer than fifty percent of the students. The objectives tapped were identifying various types of triangles, parts of geometric figures, types of geometric solids, the area of a given figure, and the circumference of a circle.



-117-

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL GENERAL MATHEMATICS

-				
١	B.2	Subtract numbers with up to seven digits]
1	B.J	Divide five-digit by three-digit nos. with remainders	12	
1	B.7	Find the average of whole nos. and decimals; word problems	3	
I	B.17	Solving one-, two-, or three-step word problems	-	
ı	C.3	Arranging fractions in order of size	4	Į
١	C.7		S	
1	E.2	Add 2 or 3 mixed nos. with unlike denominators; regrouping	6	
١	E.12	Doing two-step conversions between units of time	7	
١		Identify the appropriate unit of measurement; Engl. or metr	8	
ı	F.13	Find the perimeter of any figure, given a word problem	9	1
ı	A.10	Express a nc. up to 100 as a product of prime factors	0 -	1
ı	A.4	Identify a 10-digit no. from its expanded exponential not.		
I	A.13	Finding the square roots of perfect squares	1	
I	B.9	Knowing the order of operations	31	
ł	B.12	Writing open no. sentences for word sentences	# <u></u> ⊢	
I	B.13	Solving a simple equation with one variable & one operation	5 -	
ı	B.16	Identifying missing info needed to solve a word problem	6	
1	C.9	Multiply 2 or 3 common frac., mixed nos, find frac. of money	1	
ı	C.10	Divide common fractions, mixed nos. or whole nos.	∞⊢	
ı	C.12	Solve ratio and proportion problems	9	
I	D.11	Change any common fraction to a decimal	2	
I	C.14	Solve 1- and 2-step word problems involving fractions	2	i
I	D.12	Change decimals to the 1,000 place and mixed dec. to \$	2	
ı	D.14	Change common fractions to percents; w/terminating decimals	3 ~	
I	D.16	Finding the percent of a whole no. or mixed decimal	2	
1	D.17	Finding what percent one number is of another; word problem	5 2	
ı	D.19	Sol ig 1- & 2-step word probs. involving decimals & perc.	6	
I	E. 6	Doing 2-step conversions within English & metric measures	2	
ı	E.8	Doing 2-step conversions within English & metric weight	2	
ı	E.9	Knowledge of degrees in Farenheit to do simple word problem	9	
۱	G.3	Estimating answers to word problems by rounding off	3	
	F.6	Find a missing angle in a triangle and quadrilateral	<u>س</u> ــ	
	F.8	Identifying polygons with up to twelve sides	23	
	F.12	Identifying an isosceles, scalene and equilateral triangle	W W	
	F.15	Find the area of a triangle, parallelogram or tracezoid	N G	
1	F.16	Identify center, diameter, radius, chord, arc,etc; circle	σw	
1	F.17	Finding the circumference of a circle	63	
I	F.18	Finding the area of a circle	3	1
1	F.19	Identifying seven geometric solids	œ 33	!
I	F.21	Find the volume of a rectangular solid or cube; word prob.	10 W	1
	G.4	Identifying probability in word problems	04	
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•		The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	<u> </u>	



417 GENERAL MATH TECRSOOS 11/07/86
PERCENTAGE OF CORRECT ANSWERS PLR ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

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BASIC MATHEMATICS I

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Numbers/Numeration (7 items), Computation (4 items), Fractions (8 items), Decimals/Percents (7 items), Measurement (6 items), Geometry (5 items), and Estimating/Graphs (3 items).

The population includes all high school students (with the exception of the exam schools) who were enrolled in the Basic Mathematics course and for whom valid answer sheets were turned in.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed very poorly on this test with a system-wide average score of 44%. Generally, students appear to be mastering the objectives measured by the Computation items and most of the Estimating/Graphs items; in the latter domain students had difficulty rounding off mixed decimals to the nearest whole number.

However, for all other domains there are many items in which students are performing very poorly. In Numbers/Numeration students had difficulty identifying place value to the hundred millions place, arranging integers in order, and finding the square root of perfect squares. In the Fractions domain, out of eight items, there are six that fewer than 50% of the students answered correctly. The objectives measured by these items are adding, subtracting, multiplying, and dividing common fractions and whole numbers. In the Decimals/Percents domain, out of seven items, there are five that fewer than 50% of the students answered correctly. Students had difficulty with multiplying and dividing simple and mixed decimals and identifying decimal place value to the thousandths place. In both Measurement and Geometry, all items were answered incorrectly by more than 50% of the students. In Measurement many students are unable to calculate elapsed time given two points in time; to add and subtract English linear measurement and units of weight with regrouping; and identify the appropriate unit of measurement in English or metric. In the Geometry domain, many students are unable to find the perimeter or area for various geometric shapes; and identify terms dealing with lines given a map or isolated drawings.



DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL BASIC MATHEMATICS I

			_
A.3	Identifying place value to the hundred millions place		ļ
A.4	Arranging integers in order (under ten)	. 2	i
A.6	Identifying numbers divisible by 2, 3, 4, 5, and 10	l.	r
A.8	Identify the prime factors of nos. between one and fifty	3	
A.11	Finding the square root of perfect squares	4	
B.2	Add 3 nos. w/different nos. of digits, written vert. or horiz.	5	
B.6	Divide 3-digit nos. by 2-digit nos. with remainders	6	
B.9	Find the average of a set of 2 digit man (no week's land)	7	
B.10	Find the average of a set of 2-digit nos. (no remainders) Multipy and divide in parenthesis before add or subtract	∞	
C.2	Shading in a fractional new of a shall write	9	
C. 4	Shading in a fractional part of a whole unit	0 -	
C.3	Identify fractions equal to one-half, one-third, one-fourth, etc.		
C.6	Add & subtractions w/unlike denominators	2	
C.7	Add & subtract mixed nos. w/like denoms, no regrouping	ωH	
	Subtract a common fraction from a 1-digit whole number	4-	
C.8	Multiply common fractions w/cancellation "of" substitutes x sign	100 H	
C.9	Multiply a common fraction & a whole no. "of" for x sign	61	
A.7	identity prime and composite nos, between one and fifty	7	
C.11	Divide common fractions, answers in simplest terms	∞⊢	
D.5	Add & Subtract decimals & mixed decimals, w/imegial nos of place	9 1	
D.6	Multiply simple deci. a mixed deci. w/l-digit multiples & multic	10 %	
D,	Divide decis. G mixed decis. Of 2-digits by 1-digit divisors	12	
D.8	writing mixed fractions w/10ths and 100ths as mixed decimals	22	
D.2	identifying decimal place value to the thousandths place	32	
D.9	Applying the complementarity of percents to 100%	42	
E.1	Calculate elapsed time given 2 pts. in time in digital or conver	101 N	
E.3	lell the no. of days in ea. month & order of the months	6	
E.6	Add & subtract English linear measurements w/regrouping	7	
D.1	Write mixed decis. to the 1000th place written in words as nos	00 N	
E.10	ACC 9 SUBTRACT English units of weight with repromising	9	
E.12	Knowledge of degrees in ahrenheit & boiling & freezing points	0 3	
E.15	Identify the appropriate unit of measurement English or metric	3	
F.1	Identify terms dealing w/lines given a map or isolated drawings	~ ~ ·	
A.9	Expressing exponenets in words and vice-versa	2 3	
G.2	Rounding off mixed decimals to the nearest whole number		
F.9	Finding the perimeter of polygons	43	
F.10	Find the area of a rectangle or square, given the formula	5 3	
F.11	Find the area of a right triangle given formula	6 3	
F.12	Find the area of a right triangle, given formula, answ. sq. unit Identifying the diameter of a circle		
G.3	Estimating encuers to uppd mobiles by sumiling of	∞ ∪	
G. 5	Estimating answers to word problems by rounding off Use picture, bar & line graphs to answers and	9	
	Use picture, bar & line graphs to answer ques. & solve problems	40	



415 BASIC MATH I TECR5005 11/07/do
PERCENTAGE UF CURRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL SCAL 1100 61 38 64 38 48 93 64 38 70 35 80 38 40 54 51 36 58 51 70 58 6 38 41 70 35 16 9 61 22 6 54 38 74 29 35 29 45 41 45 70 47 DISB 61 38 64 38 48 93 64 38 70 35 80 38 48 54 51 38 58 51 70 58 6 38 41 70 35 16 9 61 22 6 54 38 74 29 35 29 45 41 45 70 47 136) ** 50 83 66 83 ** 66 66 66 33 83 33 ** -* 33 66 83 66 83 33 9 35 83 16 50 16 50 66 ** 50 33 66 66 50 83 ** 62 DISC ** 50 83 66 83 ** 45 66 56 33 83 33 ** ** 33 66 83 83 33 83 83 83 83 83 86 50 16 50 66 66 ** 50 33 66 66 50 83 ** 62 135 31 43 25 73 25 60 40 63 33 35 31 33 40 26 33 26 56 25 36 31 35 21 21 26 48 21 26 48 30 38 30 33 26 41 35 50 50 26 56 46 37 1070 39 45 61 80 32 79 54 56 38 44 46 26 46 30 29 34 40 27 54 32 25 42 31 43 39 21 40 51 40 30 44 29 32 42 38 52 36 36 48 82 42 0150 36 44 46 77 29 71 48 59 36 40 40 29 43 29 31 31 47 26 47 32 29 33 27 36 43 21 35 50 36 33 38 31 30 41 37 51 41 32 52 68 40 1190 72 44 62 34 58 ** 89 58 72 44 79 37 79 51 51 51 68 72 82 65 0 44 48 79 51 24 34 41 48 20 34 58 89 48 34 24 27 34 65 82 54 1210 62 71 51 60 68 88 71 65 88 37 65 37 48 37 34 51 60 37 82 31 2 54 20 48 42 31 8 54 14 45 20 54 74 40 48 8 62 57 51 40 48 DISL 67 59 56 48 64 93 79 62 81 40 71 37 62 43 42 51 64 53 82 46 1 50 32 62 46 28 20 48 29 34 26 56 81 43 42 15 46 46 57 59 51 DI SA DISB 61 38 64 38 48 93 64 38 70 35 80 38 48 54 51 38 58 51 70 58 6 38 41 70 35 16 9 61 22 6 54 38 74 29 35 29 45 41 45 70 47 UISC ** 50 83 66 83 ** 66 66 54 83 33 ** ** 33 66 85 66 85 66 83 35 U 66 33 83 37 83 16 50 16 50 66 66 ** 50 33 66 66 50 83 ** 62 DISD 36 44 46 77 29 71 48 59 36 40 40 29 43 29 31 31 47 26 47 32 29 33 27 36 43 21 35 50 36 33 38 31 30 41 37 51 41 32 52 68 40 DISC 67 59 56 48 64 93 79 62 81 40 71 37 62 43 42 51 64 53 82 46 1 50 32 62 46 28 20 48 29 34 26 56 81 43 42 15 46 46 57 59 51 STUT 48 47 57 65 42 80 59 57 53 39 54 37 50 37 36 68 57 60 39 18 39 30 48 42 24 27 51 32 30 38 39 50 40 38 39 44 37 53 67 44

BASIC MATHEMATICS II

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring the circled objectives in the curriculum strands of Computation (7 items), Fractions (7 items), Decimals/Percents (10 items), Measrement (3 items), Geometry (8 items), and Estimating/Graphs (5 items).

The population includes all high school students (with the exception of the exam schools) who took the Basic Mathematics II course and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 55%. Generally, students appear to be mastering the objectives measured by the Computation items and most of the Decimals/Percents items; in the latter domain students had difficulty changing the percents for simple common fractions to fractions and solving one- and two-step word problems involving decimals and percents.

Mowever, for all other domains there are many items in which students are performing poorly. In Fractions students had difficulty subtracting mixed numbers with like denominators with regrouping, solving ratio and proportion problems in practical situations, and solving one- and two-step problems involving frac-In the Measurement domain, fewer than 50% of the students answered each of the items correctly. The objectives measured by these items were calculating elapsed time given two points in time, renaming English and metric linear measurement, and knowledge of degrees in Fahrenheit and boiling and freezing points. Half of the items in Geometry were answered incorrectly by more than 50% of the students. The objectives tapped were finding the area of a triangle or parallelogram, identifying the parts of a circle, finding the circumference of a circle, and finding the volume of a rectangular solid or cube given the formula. mating/Graphs students did poorly on the items that measured rounding decimals, estimating answers to word problems, and identifying probability in word problems.



DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL BASIC MATHEMATICS II

B.1 B.4 E.12 C.8 D.7 F.7 B.17 C.113 D.14 F.113 B.14 B.16 D.15 D.17 D.17 B.17 D.17 D.17 B.17 D.17 B.17 D.17 B.17 D.17 B.17 B.17 B.17 B.17 B.17 B.17 B.17 B	Add & subtract mixed nos. w/unlike denoms; no regrouping Multiply 2 or 3 common fracs., mixed nos., or whole nos. Divide common fractions, mixed numbers or whole numbers Solve ratio and proportion problems in practical situations Solve 1- & 2-step word problems involving fractions Divide decis. & whole nos. w/1-digit divisors, w/o remainders Changing common fractions to (terminating) decimals Change a whole-no. percent of 2 digits to its deci. equivalent Change common fractions to percents (only terminating decimals) Find the perimeter of a square, rectangle or triangle/word prob. Find area of triangle or parallelogram, give formula, ans.sq.unit Multiply and divide in parentheses before add or subtract Use letters as place holders in simple open number sentence Evaluate an expression w/1 variable, given value of variable Find the missing info needed to solve a word problem Tell what % of a figure is shaded, give answ. as common fraction Change the percent for simple common fractions to fractions Find the percent for simple common fractions to fractions Find the percent for whole number (only whole number percents) Solve 1 & 2 step word probs. involving decimals & percents	$egin{array}{cccccccccccccccccccccccccccccccccccc$	
F.13 B.9 B.13 B.14 B.16 D.16 D.15	Find area of triangle or parallelogram, give formula, ans.sq.unit Multiply and divide in parentheses before add or subtract Use letters as place holders in simple open number sentence Evaluate an expression w/l variable, given value of variable Find the missing info needed to solve a word problem Tell what i of a figure is shaded, give answ. as common fraction Change the percert for simple common fractions to fractions Find the percent f a whole number (only whole number percents)	3456789012345	



416 BASIC MAIN II TECR5005 11/07/00
PERCENTAGE OF CURRECT ANSWERS PLR TIEM
NOTE 100 PENCENT ON A PARTICULAR TIEM IS INDICATED BY **

SCHL 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 10 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL 1340 92 64 35 38 61 30 35 58 51 82 38 66 79 66 64 51 38 46 48 76 33 48 46 46 82 33 74 17 25 58 43 35 35 51 48 69 46 17 76 43 51 1110 76 42 42 23 34 21 31 63 50 57 36 60 71 55 42 36 34 23 42 57 71 52 26 23 76 28 65 21 10 36 42 28 36 36 23 55 34 7 50 28 40 DISA 84 53 38 31 48 25 33 61 50 70 37 63 75 61 53 44 36 35 45 67 27 50 36 35 79 31 70 19 18 48 42 32 36 44 36 62 40 12 63 30 46 82 39 32 27 45 17 35 64 43 71 52 67 72 54 54 43 27 57 42 76 23 63 28 53 78 32 69 27 30 46 41 47 31 30 32 67 30 26 60 32 46 1100 90 52 37 17 45 35 35 67 47 82 35 75 72 72 70 35 27 50 50 67 50 60 45 65 92 32 72 25 25 60 57 37 20 25 40 75 42 22 75 42 50 84 44 34 23 45 23 35 65 45 75 46 69 72 01 60 40 27 54 45 73 32 61 34 57 83 32 70 26 28 51 46 44 27 28 35 69 34 24 65 36 48 1060 84 64 52 56 68 32 48 56 64 56 52 64 88 68 56 24 24 56 20 84 28 56 32 64 92 32 68 32 28 56 64 44 52 52 36 76 44 24 60 40 52 1120 78 42 47 52 71 28 47 66 66 73 61 57 80 45 54 45 40 59 57 76 50 83 50 54 78 54 66 30 23 71 57 57 76 50 35 73 57 40 64 50 57 1160 82 61 44 21 42 46 21 51 59 61 53 59 72 63 44 44 48 61 42 59 46 78 48 59 82 63 72 31 34 44 23 48 53 46 34 65 46 44 59 61 52 DISC 81 55 47 40 58 36 36 57 63 64 56 59 78 57 50 40 40 59 42 71 43 75 45 58 83 53 69 31 28 57 44 50 61 49 35 71 50 38 61 52 54 1050 87 57 50 42 67 42 53 71 50 69 45 73 64 67 49 53 43 54 73 79 61 65 31 87 84 47 80 35 44 57 57 47 47 45 26 68 52 23 73 50 57 1970 83 62 64 56 70 45 58 75 61 89 50 84 85 72 75 65 43 69 70 88 66 74 40 80 88 39 81 37 57 69 52 64 38 51 39 76 52 31 77 55 63 85 60 59 51 69 44 56 73 57 81 48 80 79 70 65 60 43 63 71 84 64 71 34 83 86 42 81 36 54 64 54 58 42 48 34 73 52 28 76 53 61 1380 89 52 41 19 71 30 44 59 60 81 48 76 84 60 55 44 14 57 61 08 54 65 50 68 84 40 71 26 32 57 40 42 48 62 44 74 44 23 76 59 56 1190 79 71 43 23 57 33 33 67 59 85 56 78 86 76 62 49 47 58 41 82 66 78 37 73 88 31 71 43 34 64 46 51 52 46 32 74 61 23 71 56 57 84 60 50 48 65 25 46 70 71 79 42 70 74 58 60 55 42 51 60 80 53 17 36 69 83 41 81 34 31 72 51 60 63 46 34 82 46 37 78 58 58 88 44 51 26 55 22 17 55 42 71 28 73 82 77 62 44 22 46 51 77 40 64 77 73 93 62 82 13 17 57 33 57 60 37 35 64 26 28 73 48 51 86 56 44 38 67 29 41 63 61 80 46 75 82 66 58 48 37 55 57 74 55 70 43 69 85 42 74 30 33 82 43 49 53 53 39 75 46 27 76 57 56 DISA 84 53 38 31 48 25 33 61 50 70 37 63 75 61 53 44 36 35 45 07 27 50 36 35 79 31 70 19 18 48 42 32 36 44 30 62 40 12 63 36 46 DISB 84 44 34 23 45 23 35 65 45 75 46 69 72 61 60 40 27 54 45 73 32 61 34 57 83 32 70 26 28 51 46 44 27 28 35 69 34 24 65 36 48 DISC 81 55 47 40 58 36 36 57 63 64 56 59 78 57 50 40 40 59 42 71 43 75 45 58 83 53 69 31 28 57 44 50 61 49 35 71 50 38 61 52 54 DISD 85 60 59 51 69 44 56 73 57 81 48 80 79 70 65 60 43 63 71 84 64 71 36 83 86 42 81 36 54 64 54 58 42 48 34 73 52 28 76 53 61 DISE 86 56 44 38 67 29 41 63 61 80 46 75 82 66 58 48 37 55 57 74 55 70 43 69 85 42 74 30 33 62 43 49 53 53 39 75 46 27 76 57 56 STDT 85 55 46 38 62 31 42 64 58 77 47 72 79 65 56 48 37 55 56 75 51 68 41 67 84 42 74 30 34 59 45 49 48 48 37 73 45 27 72 52 55



GEOMETRY

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring the circled objectives in the curriculum strands of Early Structure: Lines/Planes/Angles (2 items), Triangles (3 items), Quadrilaterals/Regular Polygons (5 items), Similarity (9 items), Area (6 items), Pythagorean Theorem (7 items), Circles/Spheres (5 items), and Solids (3 items).

The population includes all high school students (with the exception of the exam schools) who took the Geometry course and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed very poorly on this test with a system-wide average score of 45%. Generally, students appear to be mastering the domains of Early Structure: Lines/Planes/Angles, Triangles, and Quadrilaterals/Regular Polygons. However, in the remaining domains there appear to be serious deficits. In Similarity students are having difficulty with converting measurements on a triangle into proportions, determining whether or not two triangles are similar, finding measurements in pairs of similar triangles, finding the three geometric means in a right triangle, and calculating the areas of similar figures. Of the six items in the Area domain, there are five items which fewer than 50% of the students answered correctly. Of the seven items tapping the Pythagorean Theorum, there are six items which fewer than 50% of the students answered correctly. Performance in the Circles/Spheres and Solids domains is also poor. Students had difficulty performing calculations involving arcs, angles, area, circumference, surface areas, and volumes.



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DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL GEOMETRY

G.2	Finding missing measurements in quadrilaterals	.	
G.4	Proving assertions about quadrilaterals	2	
E.13	Calculating angles of triangles	ω.	
B.7	Calculate angle measurements using info on congruent angles	4	
B.8	Write short proofs with postulates & theorems of congr. angles	5	
E.10	Calculating values using the midline theorem	6	
C.6	Prove two given triangles congruent, using SAS, ASA, OR SSS	7	
G.6	Find measurements involving the diagonals of quadrilaterals	∞	
G.8	Demonstrate visually basic info about angles of polygons	9	
G.9	Solve problems involving angles of regular polygons	0	
H.1	Express relationship between parallel lines & transversal		
H.2	Using the relationships to calculate measurements	2	
H.4	Converting measurements on a triangle into proportions	31	
H.5	Finding missing measurements on a triangle; using proportions	4-	
H.7	Determining whether two given triangles are similar	5 –	
H.8	Finding missing measurements in pairs of similar triangles	61	
H.14	Calculate measurements on a triangle with angle bisectors	71	
H.15	Finding the 3 geometric means in a right triangle	∞⊢	
H.16	Calculating areas of similar figures	91	
I.1	Calculate areas of triangles & quads using basic & Heron's form	0 2	
		- 2	
I.2	Find missing dimensions of quadrilaterals given the area	22	
I.3	Find areas of triangles with common dimensions	u 2	
I.4	Finding areas of complex polygonal regions	42	
I.5	Finding areas of regular polygons	5 2	
J.1	Stating the Pythagorean theorem in terms of areas	6	
J.5	Determining whether a given triangle is a right triangle	7	
J.4	Finding the missing sides of right triangles	æ ~	
J.6	Finding missing dimensions of the 30-60 right triangle and the	9	
J.6	the isosceles right triangle	0 3	
J.9	Finding an altitude of a given triangle	⊢ ω	
J.13	Solving problems involving the Pythagorean theorem	N 03	l
K.5	Perform calculations involving circles, chords, and tangents	W W	Į
K.6	Perform calculations involving arcs	W 4	
K.9	Calculate measures of angles, both sides intersect a circle	S	1
K.16	Perform calculations involving the area of a circle	6	
K.15	Perform calculations involving the circumference of a circle	73	j
L.1	Calculate the surface area and volume of a given prism	∞∽	1
L.4	Calculate the surface area & volume of a given cylinder	93	1
L.2	Calculate the surface area and volume of a given pyramid	40	1
	•	1	
		<u> </u>	11



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PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 35 36 37 38 39 40 TUTAL 1040 64 34 39 59 20 62 28 73 56 52 70 59 45 63 39 45 53 42 23 43 45 51 42 50 38 50 35 45 38 57 35 35 54 53 47 19 43 34 38 44 46 1110 69 40 53 50 37 50 38 /3 58 53 77 07 41 54 38 48 02 36 34 48 62 44 49 30 48 36 24 52 54 64 52 44 44 50 40 40 48 38 38 55 46 DISA 60 36 3 55 28 57 33 73 57 52 73 60 43 59 39 46 57 39 28 45 53 47 45 41 42 43 33 48 75 60 42 39 49 52 44 28 45 33 38 44 47 1250 70 13 40 56 16 45 47 83 60 35 64 71 48 78 29 51 74 48 25 29 39 48 24 22 34 42 25 25 41 45 27 36 42 45 33 19 37 44 20 45 41 1100 37 18 10 22 22 45 31 77 29 33 72 35 16 54 25 10 31 43 27 37 35 37 25 14 50 39 8 43 47 43 25 29 39 25 20 12 37 33 35 54 33 0158 59 14 30 45 18 45 41 81 50 34 66 59 37 70 27 39 60 46 25 31 37 44 24 19 39 41 19 31 43 44 26 33 41 38 29 16 37 40 25 47 39 1363 97 53 66 71 25 58 46 76 64 48 79 66 28 74 46 53 71 30 33 43 69 69 61 66 53 35 56 56 58 46 46 41 56 71 53 41 48 53 53 69 56 61 27 13 27 27 7) 36 97 52 45 79 65 22 75 29 29 50 18 18 25 61 50 20 20 27 40 45 52 47 54 31 25 40 34 27 27 35 31 4 36 39 43 11 22 45 29 59 29 63 38 43 65 34 18 64 34 34 47 13 18 25 36 31 34 25 22 27 31 36 36 38 11 29 34 15 9 9 25 31 13 25 31 015C 66 29 33 47 27 66 37 79 51 45 74 55 22 70 36 38 55 20 22 30 55 49 37 36 33 34 44 48 47 46 29 31 43 39 29 25 36 38 22 42 42 1050 66 55 51 67 40 62 67 79 53 63 76 66 51 64 58 53 67 51 50 51 56 72 60 65 46 58 33 69 58 64 59 61 68 59 57 44 50 46 35 50 58 1070 58 12 37 34 14 57 23 75 42 53 74 43 39 39 25 32 50 25 21 23 34 29 30 17 19 40 20 25 35 42 23 26 58 37 24 7 9 30 13 25 33 DISD 62 35 45 52 28 60 47 77 48 59 75 56 45 53 43 44 59 39 37 38 46 53 46 43 34 50 27 49 48 54 43 45 64 49 42 27 32 39 25 39 46 1000 72 24 43 46 25 62 51 77 50 56 78 58 25 62 25 31 48 26 37 30 52 35 27 33 27 46 24 33 34 41 24 26 54 46 37 15 37 30 19 26 40 1190 42 26 42 63 15 52 52 84 42 63 73 42 5 57 26 36 63 10 10 36 52 31 15 36 10 31 10 52 31 36 15 31 68 47 15 15 15 15 57 0 47 36 1210 68 33 61 74 13 71 31 83 58 58 86 64 61 77 33 59 76 33 41 44 53 50 39 47 39 26 53 69 75 52 48 52 51 53 35 60 46 60 39 53 1240 87 13 60 83 46 72 47 86 72 63 93 86 72 80 61 30 83 19 36 65 60 64 54 56 79 31 53 42 58 65 38 52 58 58 47 41 68 60 54 57 60 DISE 72 24 53 65 25 67 43 92 58 54 84 66 48 71 37 53 67 26 37 44 54 47 37 40 45 39 31 43 52 58 36 40 57 51 44 28 51 44 40 39 49 0154 66 36 46 55 28 57 33 73 57 52 73 60 43 59 39 46 57 39 28 45 53 47 45 41 42 43 30 48 46 60 42 39 49 52 44 28 45 33 38 44 47 0158 59 14 30 45 18 45 41 d1 50 34 66 59 37 70 27 39 60 46 25 31 37 44 24 19 39 41 19 31 43 44 26 33 41 38 29 16 37 40 25 47 39 0150 66 29 33 47 27 66 37 79 51 45 74 55 22 70 36 38 55 20 22 30 55 49 37 36 33 34 44 48 47 40 29 31 43 39 29 25 36 38 22 42 42 DISO 62 35 45 52 28 60 47 77 48 59 75 56 45 53 43 44 59 39 37 38 46 53 46 43 34 50 27 49 48 54 43 45 64 49 42 27 32 34 25 39 46 DISE 72 24 5 05 25 67 43 82 58 59 84 06 48 71 37 53 67 26 37 44 54 47 37 40 45 39 31 43 52 58 36 40 57 51 44 28 51 44 40 39 49 STUT 66 28 44 55 25 60 41 79 53 52 76 60 41 65 37 46 61 33 32 39 50 48 38 37 40 41 30 44 48 54 36 39 52 47 39 26 42 40 32 42 45



ALGEBRA I - GENERAL

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring the circled objectives in the curriculum strands of Structure of Real Number System (1 item), Algebraic Structure (2 item s), Equations/Inequalities (3 items), Exponents (1 item), Polynomials (3 items), Special Products/Factoring (3 items), Rational pressions (8 items), Graphs of Linear Equations/Inequalities (7 items), Irrational Numbers (5 items), Relations/Iunctions (4 items), and Quadratic Equations (3 items).

The population includes all high school students (with the exception of the exam schools) who took an Algebra I/General course and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed very poorly on this test with a system-wide average score of 40%. Generally, students appear to be mastering the domains of Algebraic Structure and Exponents and most of the items in Polynomials and Special Products/Factoring. However, of the thirty-one items in the remaining domains, there are twenty-eight items which fewer than 50% of the students answered correctly. Essentially, students do not know the domains of Equations/Inequalities, Rational Expressions, Graphs of Linear Equations/Inequalities, Irrational Numbers, Relations/Functions, and Quadratic Equations.



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DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL ALGEBRA I GENERAL

A.7	Simplify using the laws of order of operations	—	
B.4	Find the union and the intersection of sets of numbers	2	
B.7	Evaluate numerical & algebraic expressions involving ()	ω.	
C.1	Translating English phrases into algebraic phrases	4	
C.5	Solve an equation with one variable contained in 2 or more terms	ا ن	
C.10	Graph the solution set of a linear inequality on the no. line	6	
D.2	Evaluating terms involving exponents	7	
E.4	Add and subtract polynomials	œ	
E.5	Multiply polynomials	9	
E.53	• • • • • • • • • • • • • • • • • • • •	1	
F.4	Identify and factor special types of polynomials	1	
F.6	Identify and factor general trinomials	. 1	
F.7	Combining several types of factoring	3.1	
G.3	Writing rational expressions in the simplest form	5 <u>-</u>	
G.10	Find the lowest common denom of fractions with polynomial denoms		
G.5	Add and subtract fractions with monomical denominators	1	
G.11	Add and subtract rational expressions with polynomial denoms	1	
G.12)			-
G.12	· · · · · · · · · · · · · · · · · · ·	1 9	
G.:3	Solving open sentences containing rational expressions	2	
G.14	Solving fractional equations and checking answers	2	
H.3	Finding the slope of a line given two points	نڊ ين	
H.4	Writing the equations of a line given the slope and one point	2	
Н.6	Write the equation of a line given 2 points on the line	2	
H.2	List ordered pairs that satisfy a given linear equation	2	
H.7	Graphing the line Ax + By = C by plotting points	2	
Н.9	Graphing a linear equation using the slope-intersect method	2	
H.10	Solving a system of equations using addition or subtraction	82	
I.3	Simplifying radicals with numerical radicands	2	
I.4	Simplify radicals w/radicands containing algebraic expressions	3	
I.5	Multiplying radicals with the same indices	13	
I.6	Combining radicals by addition and/or subtraction	2	l
1.7	Rationalizing expressions w/simple radical denominators	33	
J. ì	Identify the domain and range of sets of several ordered pairs	43	
J.1)	,	53	
J.3	Evaluating functions using functional notation (f(x)	63	
J.5	Determine if a relation is a function, use the vert. line test	3 7	
K.2	Solving quadratic equations by factoring	æ 3	
K.2	, , , , , , , , , , , , , , , , , , , ,	93	ļ
K.4	Solving quadratic equations by using the quadratic formula	0.4	
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PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM 15 INDICATED BY **

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ALGEBRA I - COLLEGE

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring the circled objectives in the curriculum strands of Equations/In-equalities (2 items), Exponents (1 item), Polynomials (1 item), Special Products/Factoring (4 items), Rational Expressions (11 items), Graphs of Linear Equations/Inequalities (9 items), Irrational Numbers (6 items), Relations/Functions (3 items), and Quadratic Equations (3 items).

The population includes all high school students (with the exception of the exam schools) who took an Algebra I/College course and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, student performance on this test is very poor with a system-wide average score of 40%. It should be noted, however, that there are no schools included from either Area A or Area C. Generally, students appear to be mastering the objectives in Equations/Inequalities, Exponents, and Polynomials. However, of the thirty-six items in the remaining domains, there are thirty-ly. Essentially, according to the students answered correctare not mastering the objectives in Special Products/Factoring, Rational Expressions, Graphs of Linear Equations/Inequalities, Irrational Numbers, Relations/Functions, and Quadratic Equations.



DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL ALGEBRA I COLLEGE

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E.3 D.5 C.5 F.6 G.19 G.11 G.12 G.13 G.18 G.17 G.19 H.1 H.1 I.5 I.6 I.1 J.1	Writing rational expressions in the simplest form Combining several types of factoring Add and subtract fractions with monomial denominators Divide fractions w/monomial numerators and denominators Using multiplication of (-1) to change signs of rational expr. Find the lowest common denom of fractions w/polynomial denoms Add and subtract rational expressions with polynomial denoms Multiply and divide rational expressions containing polynomials Solve inequalities containing radical expressions & check answ. Solving fractional equations and checking answers Applying rational expressions in solving word problems List ordered pairs that satisfy a given linear equation Finding the slope of a line given two points Write the equation of a line given the slope and one point Graphing the line Ax + By = C by plotting points Write the equation of a line given the slope & y-axis intercept Solving problems involving ratios Solve a system of equations using addition or subtraction Solve a system of equations using substitution Region on a coordinate system for solution of Ax + By > C Find the roots of numbers that have rational roots Simplify radicals w/radicands containing algebraic expressions Multiplying radicals with the same indices Combining radicals by addition and/or subtraction Rationalizing expressions with radical denominators Solving and checking equations w/radical expressions	$egin{array}{cccccccccccccccccccccccccccccccccccc$	
G.18 G.17 G.19 H.2 H.3 H.4 H.7 H.5 G.20 H.10 H.11 I.5 I.6 I.8 I.9	Solve inequalities containing radical expressions & check answ. Solving fractional equations and checking answers. Applying rational expressions in solving word problems. List ordered pairs that satisfy a given linear equation. Finding the slope of a line given two points. Write the equation of a line given the slope and one point. Graphing the line Ax + By = C by plotting points. Write the equation of a line given the slope & y-axis intercept. Solving problems involving ratios. Solve a system of equations using addition or subtraction. Solve a system of equations using substitution. Region on a coordinate system for solution of Ax + By > C. Find the roots of numbers that have rational roots. Simplify radicals w/radicands containing algebraic expressions. Multiplying radicals with the same indices. Combining radicals by addition and/or subtraction. Rationalizing expressions with radical denominators. Solving and checking equations w/radical expressions. Identify the domain and range of sets of several ordered pairs. Solving quadratic equations by completing the square.	$egin{array}{cccccccccccccccccccccccccccccccccccc$	
K.6 J.2 H.16	Identify roots of quadratic equations real/not real Drawing a graph representing a relation Solve geometric word problems involving two linear equations	3 3 3 4 7 8 9 0	



421 ALG 1 - CUL TECRSOUS 11/0//36 PERCENTAGE OF CURRECT ANSWERS PER TIEM NOTE 100 PERCENT ON A PARTICULAR ITCM .S INDICATED BY ** SCHE 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL 1250 35 5 7 57 5 35 5 85 0 27 2 5 7 10 10 0 57 15 50 15 22 10 12 17 25 27 12 57 50 12 30 27 2 20 12 42 10 7 35 37 22 0188 35 5 7 57 5 35 5 85 0 27 2 5 7 10 10 0 57 15 50 15 22 10 12 17 25 27 12 57 50 12 30 27 2 20 12 42 10 / 35 37 22 1350 68 87 71 57 92 76 50 61 64 68 72 12 49 53 61 42 38 45 33 61 51 23 58 43 66 75 48 44 55 43 54 43 23 42 44 45 28 33 52 36 52 0180 68 87 71 57 92 76 50 61 64 68 72 12 49 53 61 42 38 45 33 61 51 23 58 43 66 75 48 44 55 43 54 43 23 42 44 45 28 33 52 36 52 1190 59 77 40 45 31 86 31 50 50 72 63 4 9 13 45 36 18 19 31 27 27 18 45 36 54 59 22 27 45 31 50 27 4 22 68 4 13 40 45 54 37 1210 56 73 63 35 63 43 22 42 33 12 28 10 26 42 19 40 17 43 28 31 36 28 54 36 24 50 35 24 22 28 50 33 19 35 33 38 21 29 50 40 35 DISE 50 74 60 37 54 55 25 44 37 29 37 8 21 34 20 39 17 36 29 30 34 25 51 36 32 53 31 25 29 29 50 31 15 31 43 29 18 32 49 44 36 DISA DISB 35 5 7 57 5 35 5 85 0 27 2 5 7 10 10 0 57 15 50 15 22 10 12 17 25 27 12 57 50 12 30 27 2 20 12 42 10 7 35 37 22 DISC DISD od 87 71 57 52 76 50 61 64 68 72 12 49 53 61 42 38 45 33 61 51 23 54 43 66 75 48 44 55 43 54 43 23 42 44 45 28 33 52 36 52 01St 50 74 60 37 54 55 25 44 37 29 37 8 21 34 26 39 17 36 29 30 34 25 51 30 32 53 31 25 29 29 50 31 15 31 43 29 18 32 49 44 36 STOT 57 67 55 50 62 61 32 39 42 46 46 9 31 38 38 33 34 36 35 41 39 21 47 35 46 58 35 39 44 32 48 35 16 34 37 38 21 28 48 39 40



ALGEBRA II - TRIGONOMETRY

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring the circled objectives in the curriculum strands of Real Numbers/Properties/Operations (2 items), Equations and Inequalities Involving One Variable (3 items), Linear Equations (3 items), Polynomials/Factoring (3 items), Relations/Functions/Transformations (1 items), Fractional Expressions/Equations (3 items), Exponents/Powers/Roots (3 items), Complex Numbers (2 items), Quadratic Equations/Functions (4 items), Systems of Equations/Inequalities (3 items), Polynomial Functions (3 items), Equations of Second Degree (4 items), Exponential/Logarithmic Functions (3 items), Sequence/Series (3 items).

The population includes all high school students (with the exception of the exam schools) who took an Algebra II/Trigonometry course and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, student performance was poor on this test with a system-wide average score of 55%. Generally, students appear to be mastering the objectives tapped in the domains of Real Numbers: Their Properties/Operations, Equations/Inequations Involving One Variable, Relations/Functions/Transformations, Systems of Equality/Inequality, and Sequence/Series. Within the domains of Linear Equations, Polynomials/Factoring, Fractional Expressions/Equations, Exponents/Powers/Roots, Complex Numbers, and Quadratic Equations/Functions, most of the items are being mastered.

The most severe deficits as strands lie in the domains of Polynomial Functions, Equations of Second Degree, and Exponential/Logarithmic Functions. Of the ten items in those domains, there are seven items which fewer than 50% of the students answered correctly.



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DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL ALGEBRA II/TRIGONOMETRY

	.6 Simplify expressions involving absolute value		
	.5 Simplifying algebraic expressions		1
	.5 Solve linear inequalities in 1 var. & graph solution on no. lin	2	ı
	2 Solving first-degree equations in one variable		I
	.3 Express English sentences in math equations & solve them	4	I
	.1 Locating points on the Cartesian plane	5	Į.
	.9 Change a linear equat. to the y form & identify slope & y inverced.	6	l
	.12 Equation of a line passing thru a point w/parallel & perpendicu	-7	•
I	.3 Add, subtract and multiply polynomials		•
I	7 Factoring a binomia! difference between sq/sum or sq/cube	9	
	SOLVIIK INCOMITTIES DV tactoring	0 1	
E	Evaluate a function for a given value of x		i i
	Filliply 9 divide rational expressions by simplification	1 1	
	Simplifying complex expressions	1 1	
	Solve problems involving direct and indirect projections	51	
	CONVENTING PROJECT O EXPONENTIAL FORMS OF SE SECONDARIO	6 -	
	- Ward OI CADOMENTS IN SIMPLIFICATION OF SIGNAPOIC ASSESSMENT	5 7	-
	operations of t.s.x.: on radical examples ions	8 1	
H	1 Simplifying expressions containing complex members	3 9	
	4. Add, Subtract, multiply & divide complex numbers	0 2	
	-) Solve quadratic equations by factoring & use the mind formula	2	
	\sim	2	1
	4 Value of the discriminant and state the nature of the roots	3	
	10 Find the X intercept (S) of the graph of a duadratic function	42	
J	SOLATING & SYSTEM OF THIS ECHRISONS DV Addition	5 2	
J	1 Solving a system of linear equations graphically	6 2	i
J	4 Use pairs of linear equations in 2 variables to solve problems	72	1
K	ose remainder inm. to find the remain, when nolvnow is how you	æ 72	ì
K K	' "Ille a polyhomial P(X), given the zeroes of the nolynomial	9	ľ
	Ulst possible rational roots of nolynom, use synthetic division	0 3	1
L.	- I DIG UISCAIRCE OCCINEED & DES. IN A DIAME THE dietamen formals	– ω	ŀ
L	ose equation of circle to time center a radius of a circle	23	İ
L	oraph a hyperbola, show center, vertexes, foci & asymptotes	ωω	į
M.	oraph a crimpse, show center, vertexes, & foci of the ellipse	4 3	1
M.	Solving Simple logarithmic equations	53	i
M.	FILE CONTROL OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY O	63	ł
N.	Solving exponential and logarithmic equations	73	
N.	TO THE TOTAL THE MET WELL AND THE SECOND TO THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND	∞ ∪	
N.	tist it terms of any series, given the general term	93	ł
	Finding the sum of n terms of a geometric series	40	1
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434 ALG II-TRIG TEURSOOS 11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

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CALCULUS

INSTRUME IT AND POPULATION DESCRIPTION

This is a test comprised of thirty multiple choice items and five essays measuring the curriculum strands of Elementary Functions (9 multiple choice items), Differential Calculus (10 multiple choice items and 3 essays), Integral Calculus (11 multiple choice items and 2 essays).

The population includes all high school students (with the exception of the exam schools) who took a Calculus course and for whom valid answer sheets were turned in. In this report the valid data is only for one high school in Area A.

STRENGTHS AND WEAKNESSES

Overall, students performed fairly well on this test with an average score of 62%. Generally, students appear to be mastering the objectives in the Elementary Functions domain and in the Integral Calculus domain, although in the latter domain of eleven items there are two that fewer than 50% of the students answered Correctly. Those two items measure approximate areas by upper and lower (Riemann) sums and the definition of the definite integral as the limit of sum. Within the Differential Calculus domain of the ten items there are four that fewer than 50% of the students answered correctly. Those items measure understanding the derivative, applying techniques, applying Rolle's theorem, and recognizing the relation between continuity and differentiability.



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DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL CALCULUS

	Recognizing, analyzing, applying the properties and drawing					
A.1	the graph of elementary functions	<u> </u>				
A.2	Relation between the domain & range of functions & composition	2				
A.3	Handling functions involving sums, products, quotients, etc.					
A.6	Analyze restrictions in domain and equations of asymptotes	4				
A.7	Recognize even & odd functions; understand concepts of period	5				
A.8	Using trigonometric identities	o`				
A.9	Understand relation between functions: ax and logax & graphs	7				
A.10	Concept of calculus is that of limit, the law of limits	∞				
A.12	Stating the definition of continuity, theorem of continuity	9				
B.1	Understanding the derivative	01				
B.2	Use the rules of differentiation of constant, power, sum, etc.					
B.3	Stating & applying the chain rule for composite functions	1 2				
C.10	Approximate areas by Upper & Lower (Riemann) sums & Trap.rule					
B.5	Making a survey of the functions studied	4				
B.15		5-				
B.9	Expressing derivatives of higher order	6				
B.10	Understand, state and apply Rolle's theorem	1				
B.11	Understand the concepts of increasing and decreasing function	œ <u>–</u>				
B.12	Recognize the relation between continuity & differentiability	1				
B.13	Stating and applying l'Hopital's rule					
C.1	Recognize the behavior of the graph of $f(x)$ and $f(x) + k$					
C.2	Recognize the function given the derivative	2				
C.3		3 2				
C.4	Understanding indefinite integrals	د، ح				
C. 5	Recognize expressions like $f(x)$ = $f(x)$ as differential equat.	5				
C.6		6				
C.8		2				
C.9	State the definition of the definite integral as limit of sum	8 2				
C.11		9				
C.13	Apply integration to fird the average val. of func. interval	0 3				
B.1	See above descriptions	14 W				
B.2,B.1	1,B.15 See above descriptions	2				
B.4	Differentiate implicitly defined functions					
B, 7	"Geometric" derivation of Im Sin B	u u				
B'.8)	Differentiate exponential functions					
C.2,C.5	,C.6 See above descriptions	W 4				
C.6, C.8	,C.13 See above descriptions	5 W				
	,					

ADVANCED MATHEMATICS

INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of twenty multiple choice items and five essays measuring the curriculum strands of Relations/Functions (1 item), Composition/Inverses (1 item), Trigonometric/Circular Functions (5 multiple choice items and 1 essay), Conic Sections (3 multiple choice items and 1 essay), Graphs of Polar Equations (1 multiple choice item and 1 essay), Limits of Functions (1 multiple choice item and 1 essay), Polynomial Functions (1 item), Exponential/Logarithmic Functions (1 item), Sequence/Series/Limits (1 item), Permutations/Combinations (1 item), Binomial Theory (1 item), Math Induction (1 essay), Probability (1 item), Vectors (2 items), and Complex Numbers (2 items).

The population includes all high school students (with the exception of the exam schools) who took an Advanced Mathematics course and for whom valid answer sheets were turned in.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with an average score of 47%. Generally, students appear to be mastering the domains of Composition/Inverses, Trigonometric/Circular Functions, Graphs of Polar Equations/Parametric Equations, and Exponential/Log Functions. However, of the thirteen items in the remaining domains, there are eleven items which fewer than 50% of the students answered correctly. Essentially, according to the results of this test, students are not mastering the objectives in the domains of Relations/Functions, Conic Sections, Limits of Functions, Polynomial Functions, Sequence/Series/Limits, Binomial Theory, Probability, Vectors, and Complex Numbers.



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CURRICULUM REFERENCED FINAL

			1
B.5	Recognize effect on graph of a relation when $f(x)$ is replaced by $f(x+h)$; $f(x) + k$; $f(x+h) + k$; $cf(x)$, $f(cx)$, $[f(x)]$, $f([x])$	-	
C.1	Find composite of functions, state domain & range, draw their graphs recognize the relation of corresponding points (a,b) (b,a)	2	
D.2	Apply formulas for arc length & area of a circular sector, in terms of radius & central angle, with r=1, the special, important case	ω	
D.2 D.7		4	
	Understand & apply the concepts of amplitude, period, & phase shift; In graphing, what portion of graph only needs to be plotted	5	
D.13	Evaluate expressions involving inverse circular functions; draw graphs of inverse functions"	6	
E.4	Recognize equation of a hyperbolar character the density density	7	
E.6	verse a conjugate axes, vertices foci, eccentricity, of asymptotes Analyze coefficients of general quadratic, including degenerate cases	∞	
6.4	USE without proof the limit theorems, the concepts of left-hand & right-hand limits & draw the correct conclusion to exist of limit	ص ا	
H.5	ose the factor a remainder theorem in probs. A locate multiple zeros	0 -	
I.4	Recognize logarithm function as inverse of strictly increasing (one-to-one) function, the exponential function		
J.8	Recognize convergence & divergence of sequences & series, & find the limit if it exists	~ ~i	1985
K.4	Solve probs involving parmutations parmutations of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the st	ω 🗕	Q)
L.3	circular permutations Able to write any term or entire expansion of (a+b) ⁿ , use binomial coefficients in the form C(n,r) or (a) Solve probs, by applying the binomial impossibility function		19
N.3	The property of the prince of property to the following the property of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of the prince of	5 -	986
0.4	Give direction vector, a vector equation & parametric equations of a line, given two points	6 -	
0.6	Define the dot (inner) product, & from the definition, develop the properties of the dot product	71	
P.3	- FINA DIVUNCE OF A OF MOTE COMBINE MOS. A PERSONATE MOTE OF Addition	∞ -	
P.5	identities of trigonometric functions; compute powers of complex # Use the theorem for n negative and find roots of complex numbers	9 _	
F.2	Use the relations x=rcos9 & y=rsin9 to translate equations from one system to the other	0 %	
D.13	Evaluate expressions involving inverse circular functions; take note of symbols used, Sin x, Cos x, Tan x, & Arc sin aetc.	- ~	
E.7	Kewrite equation of conic is standard form, identify the curve state	22	
F.3		ω ~	
M.5	Recognize polar equations for the straight line, circle, cardiod: make a table of values, draw graphs, a find points of intersection Use mathematical induction to prove statements where direct and indirect proofs fail	\$ N	
6.5	Understand notion of limiting position of a secant to a curve and definition of the slope of a curve at a point	5 2	
	definition of the slope of a curve at a point		

ERIC

Full Taxk Provided by ERIC

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SCIENCE ELEMENTARY AND MIDDLE



SCIENCE

GRADES KII, 1, AND 2

INSTRUMENT AND POPULATION DESCRIPTION

Each of the tests is a twenty-five item multiple choice test measuring selected circled objectives in the curriculum strands of Science Skills/Processes, Science/Society, Life Science, Human Biology/Health, Physical Science, Earth Science, and Astronomy.

Biology/Health, Physical Science, Earth Science, and Astronomy.

The population includes all students enrolled in Kindergarten II, Grade 1, or Grade 2 who took an on-level test and for whom valid scores were reported.

SYSTEM STRENGTHS AND WEAKNESSES

Because of the young age of the students taking these tests they responded by writing directly in the test booklet, rather than on separate answer sheets. Teachers hand-scored the booklets and recorded the students' total scores on data collection sheets, thus individual item data for analysis are not available. Overall, students performed well on all the tests with system-wide average scores of 84% for Kindergarten II, 88% for Grade 1, and 84% for Grade 2.



BOSTON FUBLIC SCHOOLS CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE ACORE REFORT SCIENCE - LEVF, KIT

CODE 2CHOOF	NANE 2CHOOL		//	SCIENCE (OUT OF 25 ITEMS)
4160	GARDNER ELEMENTARY		,	20
4170	GARFIELD ELEMENTARY		,	19
4173	WINSHIP ELEMENTARY		,	21
4220	HAMILTON ELEMENTARY		,	
4221	BALDWIN ELEMENTARY			22
4570	TOBIN ELEMENTARY		,	20
4571	FARRAGUT ELEMENTARY		,	21
4010	AGASSIZ ELEMENTARY		/	20
4240	ELLIS ELEMENTARY		/	22
4241	HIGGINSON ELEMENTARY		/	21
4270	J KENNEDY ELEMENTARY		/	20
4310	LONGFELLOW ELEMENTARY		/	21
4311	MANNING ELEMENTARY	•	/	23
4370		•	/	22
4371	MENDELL ELEMENTARY	•	/	20
4430	FULLER ELEMENTARY	•	/	21
	PARKMAN ELEHENTARY	,	/	22
AZIG		,	/	21
4030	BEETHOVEN ELEMENTARY	,	/	20
4031	KILMER ELFMENTARY	/	,	22
4081	BATES ELEMENTARY	/	,	19
4082	MOZART ELEMENTARY	/	,	27
4290	LEE ELEHENTARY	,		18
4560	SUMMER ELEMENTARY	,		19
4561	PHILBRICK ELEHENTARY	,		23
				,

BOSTON PUBLIC SCHOOLS CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REFORT SCIENCE - LEVEL KIT

CODE 2CHOOL	SCHOOL SCHOOL	//	COLL OE 52 TIENZ)
469 0	MATTAHUNT ELEMENTARY	,	22
4070	CHITTICK ELEMENTARY	,	19
4080	CONLEY ELEMENTARY	/	23
4151	TAYLOR ELEMENTARY	/	19
4190	E GREEHWOOD ELEHENTARY	/	23
4192	F ROOSEVELT ELEMENTARY	/	22
4200	GREW ELEMENTARY	/	20
4201	CHANNING ELEMENTARY	/	22
4670	P A SHAW ELEMENTARY	/	17
D12B		/	20
4051	DICKERHAN ELEHENTARY	/	22
4130	S GREENWOOD ELEMENTARY	/	19
4131	ENDICOTT ELEMENTARY	/	24
4140	EVERETT ELEHENTARY	/	21
4150	FIFIELD ELEMENTARY	/	19
4250	HOLLAND ELEMENTARY	/	21
4340	MARSHALI. ELEMENTARY	/	
4350	MATHER ELEMENTARY	/	19
4390	KENNY ELEMENTARY	,	23
4391	OHEARN ELEHENTARY	/	21
4400	HURPHY ELEHENTARY	/	
4550	STONE ELFHENTARY	/	21
4022	PERKINS ELEMENTARY	/	21
4052	WINTHROP ELEMENTARY	/	19

CURRICULUM REFERENCE TEZI JUNE 1986 AVERAGE SCORE REPURT SCIENCE - LEVEL KII

CODE CCHOOL	SCHOOL NAME	//	01,21,111,2
4100	DEVER ELEMENTARY	//	
4120	EMERSON ELEMENTARY	/	21
4121	MASON ELEMENTARY	/	18
4530		/	21
	RUSSELL ELEMENTARY	/	22
4531	CLAP ELEMENTARY	/	21
4590	TYNAN ELEHENTARY	/	23
4592	PERRY ELEMENTARY	,	22
4630	CONDON ELEMENTARY	,	20
DIZC		,	21
4280	KFWT ELEMENTARY	,	21
4283	WPRESCOTT ELEMENTARY	,	22
4381	ELIOT ELEMENTARY	,	21
4640	BLACKSTONE ELEMENTARY	,	20
4650	QUINCY ELEHENTARY		
4062	BRADLEY ELEMENTARY	,	21
4321	ALIGHIERI ELEMENTARY		20
4322	OTIS ELEMENTARY		22
4361	ADAMS ELEMENTARY	/	21
4541	P KENNEDY ELEMENTARY	/	.21
4543	ODONNELL ELEHENTARY	/	20
DIZD	ODUMECE ECEMENIANI	′	20
	5.41. 8. 5. 6	/	21
4061	GUILD ELEMENTARY	/	27
4113	HALE ELEMENTARY	,	21
4210	HALEY ELEMENTARY	,	

12/23/86

BOSTON PUBLIC SCHOOLS CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT SCIENCE - LEVEL KII

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ZCH007	SCHOOL	SCIENCE - FEAFT KII		
CODE	NAME		//	20 IENCE
4230	HENNIGAN ELEMENTARY		//	(OUT OF 25 ITEMS)
4271	CURLEY ELEMENTARY		/	22
4360	HCKAY ELEHENTARY		/	21
4410	OHRENBERGER ELEMENTARY		/	21
4580	TROTTER ELEMENTARY		/	23
4610	HORACE MANN SCHOOL		/	22
4620	JACKSON MANN ELEMENTARY		/	16
DIZE			/	21
AZIG			/	27
8210			/	21
DIZC			/	20
0210			/	21
DIZE			/	21
1012	SYSTEM WIDE TOTAL		/	22
			/	21



BOSTON PUBLIC SCHOOLS CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT SCIENCE LEVEL 1

SCHOOL		serence feach !		
COUE	SCHOOL Name		//	SCIENCE (OUT OF 25 ITEMS)
4160	GARONER FLEMENTARY		,	
4170	GARFIFLD ELEMENTARY			23
4173	WINSHIP FLEMENTARY		/	21
4220	HAMILTON ELEMENTARY		/	21
4221	BALDHIN FLEMENTARY		/	22
4570	TOBIN ELEMENTARY		/	23
4571	FARRAGUT ELEMENTARY		,	23
4010	AGASSIZ ELEMENTARY		,	23
4240	FLLIS FLEMENTARY	•	,	22
4241	HIGGINSON FLEMENTARY		/	71
4270	J KENNFDY FLEMENTARY		/	23
4310	LONGFELLOW ELEMENTARY		/	23
4311	MANNING ELEMENTARY		/	21
4370	MENDELL ELEMENTARY		/	23
4371	FULLER ELEMENTARY		,	21
4430	PARKMAN FLEMENTARY		/	2.2
DISA			!	24
4030	SEETHOVEN ELEMENTARY		/	22
4031	KILMER FLEMENTARY		/	23
4081	BATES ELEMENTARY		/	22
4082	MOZART ELEMENTARY		/	2.2
4290	LEE FLEMENTARY		/	22
4560	SUMNER ELEMENTARY		/	23
4561	PHILBPICK FLEMFNTARY		/	23
			/	22



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		Sere we feach !		
SC HONE CODE	SCHOOL NAME		//	SCIENCE (OUT OF 25 ITEMS)
4690	MATTAHUNT FLEMENTARY		,	••
4070	CHITTICK ELEMENTARY		,	22
4080	CONLEY ELEMENTARY		,	22
4151	TAYLOR ELEMENTARY		,	22
4192	F RODSEVELT ELEMENTARY			23
\$200	GREW ELEMENTARY		,	21
4201	CHANNING ELEMENTARY		<i>,</i>	23
4670	P A SHAW ELEMENTARY		,	23
DISB			,	23
4051	DICKERMAN ELEMENTARY		/	22
4130	S GRFENWOOD ELEMENTARY		/	21
4131	INDICOTT ELEMENTARY		,	22
4140	FVERETT ELEMENTARY	•	/	21
4150	FIFIELD ELEMENTARY		,	22
4250	HOLLAND FLEMENTARY		,	23
4340	MARSHALL ELEMENTARY		,	
4350	MATHER FLEMENTARY		,	23
4370	KENNY FLEMENTARY		,	21
4391	OHEARN ELEMENTARY		,	23
4400	MURPHY ELEMENTARY		/	23
4550	STONE ELEMENTARY			21
4022	PFRKINS FLEMENTARY		,	22
4052	WINTHROP ELEMENTARY		/	22
4100	DEVER FLEMENTARY		/	25
			/	22

BOSTOM PUBLIC SCHOOLS CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT SCIENCE LEVEL 1

TECROPOOZ

SCHOOL CDDE	SC HOOL	/ //	SCIENCE (OUT OF 25 ITEMS)
4120	FMERSON ELEMENTARY	,	22
4121	MASON ELEMENTARY	,	22
4530	RUSSELL ELFMENTARY	,	
4531	CLAP ELEMENTARY	,	22
4590	TYNAN ELEMENTARY	,	2.5
4592	PERRY ELFMENTARY		22
4630	CONDOM FLEMENTARY	,	22
DISC		,	22
4280	KENT ELEMENTARY	/	22
4283	WPRESCOTT ELEMENTARY	,	23
4381	FLIOT ELEMENTARY	,	23
4640	BLACKSTONE FLEMENTARY	,	22
4650	OUTNEY ELEMENTARY	/	22
4062	BRADLEY ELEMENTARY	,	22
4321	ALIGHTERI ELEMENTARY	/	23
4322	OTIS FLEMENTARY	,	23
4361	ADAMS ELEMENTARY	,	22
4541	P KENNEDY FLEMENTARY	,	23
4543	NDONNELL ELEMENTARY	,	23
0150		,	23
4053	HERNAUNEZ ELEMENTARY	,	23
4061	GUILD ELEMENTARY	,	22
4113	HALE FLEMENTARY	,	24
4210	HALFY FLFMENTARY	,	22
		/	23



12/24/86

BOSTON PUBLIC SCHOOLS CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT SCIENCE LEVEL 1

SOCEPRIST

SCHOOL COOF	SCHOOL NAME	/ //	SCIENCE (OUT OF 25 IYENS)
4.220	HENNIGAN ELEMENTARY	/	22
4230 4271	CURLEY FLEMENTARY	/	2.2
4360	HCKAY FLEHENTARY	<i>'</i>	20
4410	OHRENBERGER ELEMENTARY	,	23
4580	FROTTER ELEMENTARY	,	22 19
4610	HORACE MANN SCHOOL	<i>'</i>	21
4620	JACKSON MANN ELEMENTARY	,	22
01SE		,	22
RISA		,	22
DISB		,	22
DISC		,	23
0210		<i>'</i>	22
01SE S T01	SYSTEM WIDE TOTAL	,	22



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BOSTON PUBLIC SCHOOLS CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REFORT SCIENCE LEVEL 2

	СНОП. :ODE		SCHOOL SCHOOL		SCIENCE OUT OF 25 TIEMS)
4	1690	HATTAHUNT	T ELEMENTARY	,	19
4	1079	CHITTICK	ELEHENTARY	/	23
4	080	CONLEY EL	LEMENTARY	/	15
4	1151	TAYLOR EL	EHENTARY '	/	21
4	1192	F ROOSEVE	ELT ELEMENTARY	/	30
4	200	GREW ELEM	1ENTARY	/	22
4	20 i	CHANNING	ELEMENTARY	/	20
4	679	WAHZ A 9	ELEHENTARY	/	21
Đ	121			/	71
4	051	DICKERMAN	I ELEMENTARY	/	21
4	130	S GREENWO	DOD ELEMENTARY	,	19
4	131	ENDICOTT	ELEMENTARY	/	21
4	140	EVERETT E	LEHENTARY	,	18
4	159	FIFIELD E	CLEMENTARY	,	20
4	250	HOLLAND E	LEHENTARY	/	21
4	340	HARSHALL	ELEMENTARY	/	2.7
4	350	HATHER EL	EMENT/ARY	/	21
4	390	KENNY ELE	HENTARY	/	22
4	391	OHEARN EL	EHENTARY	/	20
4	400	HURPHY EL	EHENTARY	,	21
4	550	210NE EFE	HENTARY	/	22
4	0 22	FERKINS E	LEMENTARY	,	20
4	05 2	WINTHROP	ELEHENTARY .	/	23
4	100	DEVER ELE	HENTARY	/	20



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00H00 5CH00	ι	2CHOOL		CIFNCE
				UT OF 25 TH M2+
41.0	GARDNER	ELEMENTARY	,	.20
4170	GARF IELD	ELEMENTARY	/	21
4173	THENIU	ELEHENTARY	,	19
4220	HAHIL TON	ELEMENTARY	,	21
4221	DALDWIN (ELEHENTARY	,	19
4570	TORIN ELI	EMENTARY	,	20
4571	FARRAGUT	ELEMENTARY	,	22
4010	ACASSIZ (ELEHENTARY	,	21
4240	FILIS ELE	EMENTARY	,	21
4241	HIGGINZON	N ELEMENTARY	,	21
4270	J KENNEDY	C ELEMENTARY	,	27
4310	LONGFELLO	DW ELEMENTARY	,	20
4311	HUNNING E	LEHENTARY	,	
4370	HENDELL E	LEHENTARY	,	21
4371	FULLER EL	CHENTARY	,	21
4430	PARKHAN E	LEMENTARY		21
DISA			,	22
4030	REE THOVEN	ELEMENTARY	/	21 .
4031	KILHER EL	EHENTARY	/	19
4081	BATES ELE	MENTARY	/	21
4082	MOZARI FL	FHENTARY	/	22
41'90	LEE ELEME	NIARY	/	2.7
4560	SUMMER EL	EHENTARY CONTRACTOR OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PRO	•	23
4561		FICHENTARY		21
			/	:0



ROSION PUBLIC SCHOOLS CHRRICH UM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT SCIENCE LEVEL 2

TECKTOTDO?

20100	DL 2CHOOL		
CODE.	NAME		SCIENCE
		// ()	OUT OF 25 TEFMS)
4120	EMERSON ELEMENTARY	,	22
4121	MASON ELEMENTARY		
4530	RUSSELL ELEMENTARY		20
4531	CLAP ELFHENTARY	'	30
4590	TYNAN ELEMENTARY	'	23
4592	PERRY ELEMENTARY	'	23
4630	CONDON ELEMENTARY	,	23
D12C		,	21
4280	KENT ELEMENTARY	,	21
4283	WORESCOTT ELEMENTARY	/	20
		/	22
4381	ELIOT ELEMENTARY	,	21
4640	RLACKSIONE ELEMENTARY	,	20
4450	QUINCY ELEMENTARY	,	.24
4062	BRADLEY ELEMENTARY		
4321	ALIGHIERI ELEMENTARY		22
4322	OFIS FLEMENTARY	,	20
4361	ADAMS ELEMENTARY	,	21
4541	F KENNEDY FLEMENIARY	,	?? .
4543	ODONNELL FLEMENTARY	,	23
DIZD		,	21
4053	HERNANDEZ ELEMENTARY	,	21
4061	GUILD FLEHENIARY	/	21
4113	HALE ELEMENTARY	/	20
4210		/	20
	HALEY ET FHENTARY	/	.11



12/29/86

BUSTON PUBLIC SCHOOLS
CURRICULUM REFERENCE FEST JUNE 1986 AVERAGE SCORE REPORT
SCIENCE LEVEL 2

2CH00	r zchooi'	INCE FLAEF 5	
CCIDE	NAME		// SCIENCE // (OUT OF 25
4230	HENNIGAN ELEHENTARY		(2M111
4271	CURLEY ELEMENTARY	/	7 22
4360	MCKAY ELEMENTARY	/	21
4410	OHRENBERGER ELEMENTARY	/	22
4580	TROTTER ELEMENTARY	/	21
4610	HORACE MANN SCHOOL	/	20
1620	JACKSON HANN ELEMENTARY	/	
321d		/	19
DISA		/	21
D12B		/	21
D12t.		/	21
D12D		/	21
91.21		/	21
2101	SYSIEM WIDE TOTAL	/	21
		/	21



HI CRIOIDO,

SCIENCE - LEVEL 3

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Skills/Processes (5 items), Science/Society (1 item), Life Sciences (15 items), Human Biology/Health (5 items), Physical Science (7 items), Earth Science (3 items), and Astronomy ($\overline{4}$ items).

The population includes all students enrolled in grade 3 who took an on-level test and for whom valid answer sheets were submit-

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed fairly well on this test with a system-wide average score of 70%. Generally, students seem to be mastering the objectives in the domains of Skills/Processes, Science/Society, and Astronomy and most of the objectives in Life Sciences and Human Biology/Health. However, within these latter two domains there are isolated objectives which are not being mastered by more than fifty percent of the students. Within Life Sciences students had difficulty describing the stages in the life cycles of plants (item # 12) and in Human Biology/Health the difficulty was in determining the function of the digestive, repiratory, and the circulatory systems of the human body (item # 24).

In Physical Science and in Earth Science there were two items in each that fewer than fifty percent of the students answered In Physical Science both items had to do with magnetcorrectly. ism and the north and south poles (item #'s 30 and 33). In Earth Science one item addressed the stages of the water cycle (item

34) and the other addressed geology (item # 36).



DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL SCIENCE - LEVEL 3

1985 - 1986

Ì				
Ì	B.6	Measure temperature in degrees Fahrenheit (Correlate w/Math Objs.)	1	
١	B.3	Measure length to the nearest half inch (Correlate w/Math Objs.)	2	
I	B.5	Measure time to the nearest minute (Correlate w/Nath Objs.)	U	
ı	B.2	Identify the appropriate measuring tool & measure unit for a task	4	
I	B.10	Record info. in the form of sketches, picutre & bar graphs, etc.	5	
ı	C.4	Name several important scientific inventors & their contributions	6	
l	D. 7	Classify animals according to certain criteria	7	
ı	D.1	Three essential characters of living things: breath, eat, reproduce	8	
l	D.11	Given animal; how it moves, communicates, & how its young are born	9	
l	D.1	Three essential characters of living things: breath, ear, reproduce	0	
l	D. 2	Group plants into major types & describe characters of each group	1	
l	D. 5	Describe the stages in the life cycle of plants	1 2	
l	D.15 D.7	Animals breathe oxygen, breathe out carbon dixode; plants do oppos.	31	
I	D. 7 D. 5	Classify animals according to certain criteria	1	
l	D.3 D.17	Describe the stages in the life cycle of plants	5	
l	D.17 D.9	Fossils as evidence of plants & animals that are now extinct	1	
l	D. 3 D. 16	Animals that lay eggs & those that bear their young w/o eggs	1 7	
ı	D.14	Different environments limits no. of plants & animals who survive	ж 1	
۱	D.14 D.12	Describe a simple food chain	1	
l	D.16	Difference between domestic animals and wild animals	2	
l	E.4	Different environments limits no. of plants & animals who survive	2	
l	E.1	Describe some difference between people at diff. life stages	2	
l	E.3	Skeleton & muscles hold our bodies upright & move them around	2	
l	E.5	Function of 3 systems in body: digestion, respiration, circulation		
	E. 7	Timing of emergence of baby teeth & of permanent teeth	5	
l	F.1	Difference between traits you inherit & those we develop Examples of three forms of matter: solid, liquid & gas	2	
	F.2	Different forms water can take: liquid, solid & gas	2	
		Way things expand when they are heated or cooled	8	
		Magnets are strongest at poles & 2 poles are labeled north & south	2	
		Objects to which magnets do and do not stick		
	F.6	Sun is a major source of energy on Earth	3	
	F.12	2 north/south poles repel, 2 different poles attract	23	
	G.4	Explain the stages of the water cycle	33	
		When air is heated it expands & rises, when cooled, contracts&sinks	3	
		Dodler and handen and find a 1 C 1 A 1 A 1 A 1 A 1 A 1 A 1 A 1 A 1 A	3 3 5 6	
		Sketch solar system, show 9 plantes & their orbits show Sun & Earth	2,3	
		How distance effects the size of stars and planets	3 3	
		Rotation of Earth on its axis & orbit of Earth around the sun	3 3	
		The moon and other planets shine only w/sunlight reflect on surface		
l		,	-	
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933 SC1 LEVL 3 TECR5005 11/07/36
PERCENTAGE OF CORRECT ANSWERS PER LIEM
NOTE 100 PERCENT ON A PARTICULAR TIEM IS INDICATED BY **

SCHL 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 16 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TUTAL 54 81 97 94 ** 91 72 91 97 81 94 70 51 91 86 91 83 97 70 94 ** 70 ** 51 89 72 72 56 67 35 91 91 45 40 64 81 64 56 48 91 77 4170 47 78 95 95 ** 56 86 95 95 91 95 65 69 95 82 86 78 95 39 86 95 52 ** 26 78 65 52 47 60 52 95 91 82 56 56 4 69 73 86 82 74 55 80 95 90 ** 70 95 90 95 95 90 25 50 70 95 95 70 90 45 80 ** 90 95 45 80 55 50 35 70 30 95 95 55 30 70 20 80 55 30 90 71 88 ** 96 96 ** 88 84 80 96 92 96 69 57 76 69 80 84 88 42 92 96 84 ** 19 61 53 42 65 76 57 96 80 50 73 38 23 69 40 50 69 73 95 87 91 91 95 87 79 87 ** 91 95 79 45 95 70 91 79 83 41 83 ** 66 95 29 83 75 45 29 79 20 79 95 70 29 62 16 29 66 91 87 73 4221 64 79 92 92 97 84 69 97 94 87 89 33 43 76 66 74 74 94 61 87 92 64 97 56 71 66 43 48 25 41 82 89 56 35 92 25 89 71 48 84 71 4570 56 68 96 87 96 71 84 90 93 93 93 43 71 93 81 78 68 90 43 90 93 53 93 53 59 71 84 59 68 56 90 90 90 56 65 28 78 84 34 90 75 77 96 98 86 ** 83 83 83 94 90 90 77 47 88 66 77 60 88 83 84 92 56 90 47 69 43 45 52 49 33 71 77 47 62 69 50 64 56 64 83 72 60 77 90 75 92 60 70 77 95 80 82 27 55 75 47 85 70 82 20 77 87 52 92 40 67 47 52 20 45 25 80 65 42 12 70 32 60 37 35 75 61 60 95 86 95 95 91 ** 95 ** 95 86 95 86 95 86 95 91 91 95 95 91 ** 73 ** 73 73 91 86 65 56 47 91 91 39 78 73 56 52 47 73 91 82 75 90 93 78 ** 63 78 90 96 96 ** 60 66 90 81 87 72 90 51 93 ** 72 93 57 66 57 60 45 57 57 90 90 42 54 54 30 69 72 60 78 74 4310 65 89 86 93 ** 72 75 82 89 93 ** 37 65 79 79 65 72 89 51 ** ** 48 8* 44 86 62 48 75 51 31 96 82 44 31 72 48 5 58 72 75 /1 70 79 83 87 95 41 91 87 ** 83 87 50 58 87 79 97 79 83 62 95 ** 62 91 50 79 75 45 66 66 50 95 91 70 45 58 45 70 41 66 95 74 4311 53 78 87 90 96 71 68 84 ** 81 96 40 62 93 59 62 81 47 43 90 87 68 90 56 81 62 50 56 56 53 81 78 59 46 75 68 12 75 75 81 71 89 87 95 93 ** 89 92 ** ** 92 98 39 89 90 89 85 89 95 60 98 96 81 98 40 93 75 46 81 37 25 90 93 75 64 78 14 78 65 60 85 78 ** 90 ** 93 93 93 87 96 93 ** 41 83 83 93 80 90 90 74 87 96 87 90 74 93 77 87 90 35 35 80 80 38 87 93 61 45 45 64 87 80 70 85 93 89 97 77 61 27 90 89 94 52 63 86 76 82 77 90 56 90 95 67 95 47 77 64 56 57 53 39 86 86 50 50 70 38 63 60 59 84 73 4030 36 64 89 78 ** 89 78 89 78 94 31 36 73 78 57 63 89 52 ** ** 30 89 10 84 63 42 52 68 15 94 68 42 21 31 0 10 26 31 73 60 40 68 ** 63 ** 50 54 72 ** 86 95 18 27 77 50 59 40 77 45 81 81 40 81 31 63 36 27 45 63 18 81 77 13 18 72 22 18 50 54 72 57 4031 54 84 * 90 * 61 84 96 96 96 96 96 78 81 90 69 81 84 81 90 * 81 * 57 78 72 51 72 72 51 87 87 66 60 63 48 90 57 60 84 78 61 47 95 90 95 95 ** 90 90 95 ** 9 85 90 61 61 71 90 71 90 ** ** ** 38 80 66 90 52 80 4 95 80 33 33 52 19 19 28 0 90 69 51 68 86 84 95 55 77 73 ** 82 91 26 33 73 75 51 66 82 48 91 ** 51 ** 22 93 44 64 66 51 26 84 71 22 37 42 8 46 40 28 84 62 59 77 91 94 98 87 89 92 91 92 94 56 64 87 87 89 82 94 64 91 96 80 94 63 92 85 68 61 75 50 92 78 75 57 59 12 64 50 80 87 78 87 87 95 91 ** 70 87 95 91 87 95 50 58 83 79 54 83 87 62 87 95 75 87 66 87 70 41 62 58 12 83 75 29 41 70 25 50 54 66 83 71 50 73 79 86 89 58 77 81 91 87 96 17 46 77 72 66 82 77 39 75 93 70 91 58 80 58 38 53 40 31 90 87 34 55 61 22 36 30 33 80 64 83 94 92 89 98 83 90 81 92 87 96 78 78 92 98 83 90 98 61 96 98 72 94 67 85 78 80 76 72 49 85 87 65 43 78 65 21 72 78 80 80 84 92 96 76 ** 64 96 96 92 ** 92 56 76 76 76 76 80 96 72 ** 96 84 96 52 88 88 72 80 72 60 96 92 80 48 84 32 88 52 72 92 80 47 63 95 93 95 93 95 97 97 94 95 63 52 93 87 80 88 93 59 68 95 69 93 61 87 66 62 75 66 50 84 90 65 61 76 52 58 77 75 86 78 72 71 89 76 91 84 71 83 96 81 91 67 77 76 76 88 81 91 69 93 93 71 86 64 86 72 54 52 66 42 77 86 79 55 67 64 66 64 76 88 76 75 79 93 82 93 62 89 93 ** 96 90 34 55 93 82 82 37 89 13 86 96 44 96 51 82 51 44 75 41 27 75 ** 34 48 65 58 51 58 77 75 69 43 69 ** 69 ** 65 91 91 95 86 ** 13 34 65 78 73 73 ** 39 ** ** 65 ** 39 82 78 34 47 34 39 86 95 73 60 56 8 30 21 4. 73 66 60 77 87 97 97 85 80 92 92 97 92 32 70 70 70 55 72 80 42 92 92 57 85 55 65 80 60 50 40 27 87 72 40 45 62 25 37 37 32 72 66 73 94 94 78 ** 84 68 73 ** ** 84 36 68 73 78 84 57 8) 57 78 89 47 ** 42 78 57 57 89 26 36 ** 89 73 31 63 47 36 63 47 63 70 60 75 91 85 96 76 83 87 94 90 94 43 59 81 79 72 76 88 55 89 95 67 93 53 83 67 56 63 58 37 87 84 53 48 64 34 48 51 55 81 71 69 80 82 82 93 41 76 80 97 82 91 17 45 95 67 78 58 82 30 86 95 36 82 43 69 47 30 41 41 23 73 47 23 50 76 54 34 76 54 86 63 41 30 80 82 93 82 97 84 82 93 ** 93 93 51 62 93 11 77 17 88 35 91 97 71 91 42 88 68 53 62 53 42 84 80 48 53 71 22 55 51 64 77 72 70 76 86 90 96 53 96 90 96 76 86 10 46 63 76 76 60 73 16 80 96 43 93 36 76 50 23 50 40 26 86 66 56 56 30 23 43 30 36 86 61 73 ** ** 96 96 80 88 92 ** 84 92 38 53 69 80 61 80 88 53 84 96 73 96 57 80 61 50 38 65 61 84 76 50 53 80 34 46 38 73 73 72 33 61 82 71 94 47 66 73 89 78 82 14 59 64 66 71 56 75 33 82 85 45 82 49 66 35 38 24 42 36 75 73 45 31 45 8 43 31 31 64 56 46 70 96 80 93 64 72 89 96 88 91 44 59 79 /1 55 /8 85 47 85 94 56 93 48 77 60 43 52 59 46 86 72 44 44 70 37 50 57 61 79 68 55 75 87 87 95 55 78 78 92 90 95 40 75 71 61 59 74 78 29 C1 94 72 88 30 74 50 73 62 40 49 85 84 72 49 46 16 48 50 56 81 67 57 65 93 76 94 38 54 73 93 89 94 26 57 68 67 52 71 76 35 78 93 38 84 24 69 32 36 39 49 27 80 72 26 30 52 19 26 46 46 86 58 50 79 95 87 ** 95 75 95 91 83 95 37 70 91 70 70 58 91 58 87 ** 58 95 37 87 62 12 50 50 50 87 66 25 62 70 54 75 54 50 87 70 41 50 95 79 ** 45 66 91 91 07 91 37 62 75 95 79 70 95 70 87 ** 79 ** 66 91 45 54 45 33 4 83 ** 20 50 87 16 45 45 29 95 67 4391 25 72 86 70 96 60 82 92 94 92 98 35 43 74 54 62 64 90 21 88 ** 52 96 52 78 35 47 52 66 47 90 72 35 41 52 33 39 52 78 72 65 88 96 ** ** 96 92 92 84 ** 84 96 60 80 92 88 72 80 80 64 88 92 92 96 84 88 88 56 44 64 24 84 72 24 36 52 16 56 40 56 96 74 68 90 90 95 ** 95 77 ** 90 86 90 90 18 95 77 45 95 ** 81 90 95 86 95 50 81 63 18 68 54 9 77 77 54 36 54 36 59 63 63 90 72



933 SCI LEVE 3 TECR5005 11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL 1 ? 3 4 5 6 7 8 9 TO 11 12 13 14 15 16 17 TH 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL 40 90 90 ** ** 90 90 85 95 95 95 60 20 85 75 ** 80 90 85 85 95 85 90 80 95 65 50 85 35 40 85 95 20 65 85 5 30 45 20 90 72 62 83 93 95 ** 83 90 93 97 90 90 79 67 90 72 65 97 95 58 79 95 81 93 18 97 58 55 46 51 44 83 90 67 72 58 76 65 48 60 86 75 57 95 95 71 ** 95 90 ** 95 95 71 80 85 90 85 61 ** 95 85 ** 33 ** 47 90 ** 85 71 33 90 95 ** 85 76 90 85 95 95 85 85 84 38 88 94 88 ** ** 94 94 94 ** ** 5 83 88 88 44 77 83 27 88 94 61 ** 27 94 77 22 55 66 27 83 88 22 11 44 5 16 16 38 83 65 70 75 95 76 95 55 84 89 80 90 36 40 70 56 75 61 80 40 75 90 44 92 35 78 30 43 38 33 23 81 81 41 38 44 12 55 58 58 73 61 95 ** 95 ** ** 90 85 65 ** 95 95 70 60 75 80 80 75 90 50 90 95 80 95 50 ** 65 75 90 90 45 ** 65 70 75 70 50 75 75 70 90 80 71 76 88 69 86 66 74 84 89 81 84 47 50 72 71 62 69 71 50 81 96 52 88 35 67 52 44 47 32 27 83 64 23 50 59 33 59 44 57 72 63 81 90 90 81 ** ** 90 90 ** ** ** 0 18 ** ** 90 ** ** 45 ** ** 63 ** 27 ** 81 ** 90 72 9 90 81 90 81 90 0 54 0 36 90 76 70 71 99 81 97 85 79 90 95 94 98 51 64 77 78 82 78 91 64 93 98 70 ** 40 93 59 64 52 63 51 91 81 55 55 77 58 68 47 86 85 76 59 78 91 82 95 66 76 85 94 87 92 41 57 78 71 67 72 84 45 84 95 59 92 42 80 53 49 51 49 38 84 76 45 48 60 31 50 50 57 81 67 59 81 89 75 94 75 78 89 94 83 ** 43 21 72 67 64 81 86 54 89 97 64 97 59 94 51 45 35 45 40 91 75 37 35 51 40 54 70 54 81 68 77 87 90 87 96 83 87 93 96 96 96 61 74 77 83 74 87 93 64 96 ** 67 ** 83 87 77 64 80 67 9 ** 90 48 38 57 6 87 64 25 93 76 66 89 93 81 98 72 84 86 94 83 93 35 62 84 79 74 84 88 52 88 94 61 93 38 84 42 44 40 37 25 77 74 37 35 42 6 44 54 40 83 66 75 86 11 80 97 77 77 86 94 88 97 63 75 83 86 77 88 88 47 86 94 55 91 36 83 55 61 38 36 86 55 69 25 41 19 22 22 58 77 68 61 82 88 90 99 72 83 80 94 81 87 61 55 76 69 64 80 86 56 84 93 66 86 53 75 54 49 54 44 36 77 83 49 65 58 66 54 51 58 80 70 47 86 86 71 75 50 63 76 95 78 89 47 82 78 73 60 71 76 60 89 89 50 89 41 54 47 41 34 56 34 84 76 45 43 52 23 58 58 54 73 64 88 96 ** 96 ** 85 ** 96 ** 92 96 96 59 96 77 88 81 ** 88 88 96 92 92 96 92 83 92 66 85 66 96 85 96 ** ** 92 81 96 92 96 90 75 87 84 90 96 72 84 93 ** 90 96 27 66 84 72 57 54 87 36 90 96 54 ** 30 81 57 27 39 60 15 81 72 21 12 39 15 21 45 36 87 63 58 76 96 76 ** 56 68 78 94 88 94 43 39 92 72 62 68 84 33 96 94 47 90 33 72 52 39 58 50 21 74 82 31 35 43 9 60 47 52 86 64 66 85 ** 80 ** 80 61 95 90 95 90 14 61 76 80 57 47 90 28 ** ** 38 95 19 66 23 14 52 42 23 95 ** 19 38 61 14 76 66 52 80 64 52 79 97 76 97 55 73 85 97 85 ** 26 73 79 85 61 64 94 35 85 97 44 ** 61 88 55 52 58 38 17 88 76 23 20 47 5 32 38 50 82 64 4543 45 72 77 75 97 22 75 81 86 93 90 29 47 84 65 45 45 81 54 84 97 56 90 15 68 59 29 40 22 15 79 75 27 36 34 13 15 40 43 79 57 DISU 62 83 90 82 97 65 78 85 94 86 93 47 58 81 75 65 73 87 51 88 95 58 92 46 78 55 46 50 47 29 83 78 42 42 51 29 49 52 51 82 67 9 6 78 18 40 40 15 21 68 50 87 62 40 81 93 75 96 59 40 81 93 93 ** 40 40 75 53 50 59 81 40 84 ** 40 96 40 78 28 75 75 9 96 78 18 40 46 15 21 68 50 87 62 4061 ** 80 ** ** 71 ** 95 ** 95 ** 42 42 85 90 85 57 "* #5 95 ** 85 ** 47 90 52 71 42 33 52 80 85 28 33 47 4 76 42 80 90 74 4113 35 60 85 95 95 85 80 80 90 90 95 80 60 85 45 75 95 90 85 90 95 80 90 30 75 70 40 75 80 55 90 80 65 65 55 60 50 80 70 90 74 61 80 ** 85 97 83 73 85 95 ** ** 69 59 88 85 92 80 95 64 92 97 76 ** 50 83 73 61 83 45 78 97 95 85 54 83 2 95 57 54 69 78 38 60 90 71 93 55 83 75 90 76 91 38 68 80 56 61 73 73 28 83 88 51 78 23 70 41 36 41 46 21 68 75 31 36 53 40 46 46 35 78 60 82 94 97 82 97 87 92 ** ** 92 97 74 74 89 82 89 66 89 61 94 ** 79 ** 69 79 66 46 82 48 74 92 97 51 69 76 58 89 74 84 94 82 4360 89 94 82 87 97 92 94 92 97 94 97 84 28 94 89 74 76 92 51 97 ** 84 ** 43 87 89 84 89 71 64 89 ** 20 82 82 46 94 89 92 94 82 44 10 71 93 96 80 ** 82 93 90 95 90 95 60 82 92 87 87 80 90 71 95 ** 65 98 38 82 71 57 63 57 44 88 88 69 66 73 71 80 77 58 80 79 51 78 95 79 98 52 71 84 96 89 95 36 51 72 78 71 70 91 44 96 97 54 88 33 73 46 46 57 47 27 90 82 32 40 64 17 78 48 42 76 66 4620 53 80 94 78 94 55 71 85 91 84 89 43 55 80 73 55 67 82 51 84 96 63 90 42 74 46 54 51 55 59 81 84 67 48 62 41 56 59 44 72 68 DISE 58 80 93 81 96 68 78 86 94 89 94 53 58 83 75 72 72 87 53 90 97 64 92 40 77 56 55 62 53 46 86 86 48 52 65 37 69 62 55 80 71 DISA 70 85 93 89 97 77 81 89 96 89 94 52 63 86 76 82 77 90 56 90 95 67 95 47 77 64 56 57 53 39 86 86 56 50 70 38 63 60 59 84 73 DISB 60 75 91 85 96 76 83 87 94 90 94 43 59 81 79 72 76 88 55 89 95 67 93 53 83 67 56 63 58 37 87 84 53 46 64 34 48 51 55 81 71 0150 59 78 91 82 95 66 76 85 94 87 92 41 57 78 71 67 72 84 45 84 95 59 92 42 80 53 49 51 49 38 84 76 45 48 60 31 50 50 57 81 67 DISU 62 83 90 82 97 65 78 85 94 86 93 47 58 81 75 65 73 87 51 88 95 58 92 46 78 55 46 50 47 29 83 78 42 42 51 29 49 52 51 82 67 0151 58 80 93 81 90 68 78 86 94 89 94 53 58 83 75 72 72 87 53 90 97 64 92 40 77 56 55 62 53 40 86 86 48 52 65 37 69 62 55 80 71 SIOT 62 80 92 84 96 70 79 86 94 88 93 46 59 81 75 71 /+ 87 51 88 95 63 93 45 79 58 52 56 52 38 85 81 49 48 62 33 55 54 56 82 70



SCIENCE - LEVEL 4

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Skills/Processes (6 items), Life Sciences (14 items), Human Biology/Health (3 (3 items), Physical Science (4 items), Earth Science (4 items), and Astronomy (9 items).

The population includes all students enrolled in grade 4 who took an on-level test and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed only fairly well on this test with a system-wide average score of 67%. Generally, students seem to be mastering the objectives in the domains of Skills/Processes, Human Biology/Health, Physical Science, and Earth Science, and most of the objectives in Astronomy. In this latter domain there is one item which fewer than fifty percent of the students answered correctly (item # 35); this item tapped knowledge of the sun's relative size in the solar system.

The most severe deficits as a strand lie in the domain of Life Sciences where of fourteen items there are four that fewer than fifty percent of the students answered correctly (items #'s 17, 19, 20, and 22). The objectives measured by these items are grouping plants into major types, recognizing that fruit develops from the flowers of plants, recognizing the parts of a flower in a drawing, and naming the ways that seeds are spread around.



-173-

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL SCIENCE - LEVEL 4

1935 - 1986

			
B.4	Measure objects or lengths to nearest quarter inch or millimeter	├	
B.3	Identify appropriate measuring instrument & unit of measmt for task	~	
B.1	Observing carefully; notice size, shape, color, texture, etc.	W	
B	Measure temperature in degrees Fahrenheit (Correlate w/Math Objs.)	4	
B.9	Make estimates of length, weight, temperature & time	5	
B.3	Identify appropriate measuring instrument & unit of measmt for task	6	
G.15	Describe fossils found in certain rocks and what they indicate	7	
G.16	Describe the work of geologists	∞	
G.3	Equator; zones around it and the effect on weather	9	
6.4	Three stages of water cycle: evaporation, forms of clouds, precipt.	0-	
F.21	Earth's gravity and Sir Isaac Newton	L _	
F.12	Identify objects to which magnets will stick	2	
F.17	Electricity will only flow in a closed circuit w/a source of power	3-	ì
F.1	Identify the three stages of matter & give examples	4	
D 3	Recognize parts of a flower in a drawing; functions of each part	S	
D.1	Difference between things living & non-living, list traits	6-1	
D.2	Group plants into major types & list characters of each group	71	
D.3	Recognize parts of a flower in a drawing; functions of each part	ω ₋	
D.4	Recognize that fruit develops from the flowers of plants	lo l	
D.3	Recognize parts of a flower in a drawing; functions of each part	02	
D.11	Classify animals as vertebrates & invertebrates; main characters	12	
D.8	Names the ways that seeds are spread around	2	
D.16	Identify the ways of telling the age of certain living things	W 72	
D.13	Identify some adaptations advantageous to predators	42	
D.12	Classify animals according to the environment where they live	5 ~	
D.5	Green plants produce starch and what they take in to produce it	2	
D.14	Life cycles of an insect, fish, amphibian, bird or mamma.	2	
D.1"	Migration, hibernation & dormancy as survival response to winter	8 2	
E.5	Distinguish between instinctive behavior & learned behavior	9	
E.2	Trace route taken by a piece of food in digestive system	0 3	
E.6	Essential conditions for survival & growth; food, water, rest, etc.	1 3	
H.2	Distinguish sun & other stars from planets & other satellites	23	
H.2 H.1	Nine known planets vary in size & circle the sun at different	22	
н.15		4 3	
H.5	Sun is an average-size star in Milky Way; has many millions	σω	
H.14	Sun is less warmer in winter because of angle of sun	6	
H.12	Daylight hours longer til 6/21 & shorter til 12/21	7	
H.6	identify contellations as groups of stars that have distinct shape	ω ω l	
H.4	opernicus's theory that the earth moves around the sun	9 3	
н.7	Describe how to locate the North Star on a clear night	0.4	
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943 SCI LIVE 4 TECK5005 11/07/86
PERCENTAGE GEORRECT ANSWERS PER LIEM
NOTE 100 PERCENT ON A PARTICULAR LIEM IS INDICATED BY **

1 2 3 4 5 6 7 8 9 10 11 17 13 14 15 16 17 18 19 20 21 27 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TUTAL SCHL 4352 65 69 86 95 60 47 65 56 86 73 82 86 91 86 65 91 26 69 8 80 34 60 78 95 60 56 52 86 60 86 78 82 65 34 91 82 34 52 47 67 4100 69 77 97 98 63 58 90 69 89 81 93 97 79 84 83 ** 5, 75 55 46 76 48 73 93 95 82 69 61 84 79 84 77 84 70 52 84 82 59 81 58 76 55 85 ** ** 60 90 95 75 85 90 95 ** 90 95 90 95 80 80 80 10 95 45 75 80 95 35 80 70 ** 65 ** 70 85 95 40 95 90 50 60 55 78 4121 45 9 ** 90 63 36 ** 63 72 8; ** ** 90 90 ** ** 81 90 18 63 72 54 81 ** ** 90 ** 45 72 81 81 90 81 90 81 90 90 45 90 72 77 41 51 89 96 37 44 72 27 41 58 68 86 58 44 74 ** 20 37 13 13 55 20 58 82 75 27 44 37 62 68 44 55 65 27 24 68 79 31 48 37 51 4531 54 45 81 ** 18 90 90 90 72 61 81 ** 54 90 ** ** 27 81 54 72 81 90 45 81 ** 45 72 72 72 ** 45 ** 72 ** 81 81 72 45 81 27 74 4590 31 40 91 ** 51 77 68 71 7" 68 68 ** 60 62 85 97 37 71 34 54 60 25 82 85 94 48 22 28 91 54 62 48 71 60 28 88 77 40 48 34 63 4630 50 71 94 98 38 87 75 71 71 70 84 94 78 85 80 ** 43 60 50 47 82 54 92 66 87 50 54 42 87 73 80 85 78 85 54 89 85 71 63 59 73 DISC 52 52 93 96 54 62 82 65 71 71 82 92 72 72 65 97 47 57 34 34 73 29 65 79 90 52 50 49 83 69 77 70 69 66 45 84 79 47 64 55 66 4760 12 69 90 96 51 54 93 84 78 57 75 87 72 60 78 ** 45 60 36 36 63 54 57 78 84 69 39 33 75 72 69 72 75 75 57 81 75 51 57 48 65 77 80 91 94 66 47 77 72 66 72 86 88 86 77 86 91 80 75 50 63 94 61 77 83 88 75 55 83 86 91 80 72 61 69 58 91 83 72 69 61 76 4283 38 68 90 95 61 61 75 61 77 55 66 91 63 55 62 95 48 56 30 37 76 41 47 73 91 47 38 50 81 56 84 65 56 72 58 93 83 48 58 62 64 4381 ** 76 ** 95 47 42 90 85 70 76 90 95 95 90 90 95 42 90 52 28 85 19 33 71 95 57 52 47 90 66 71 80 47 85 52 95 85 66 71 52 72 4643 39 47 86 95 38 41 66 48 45 67 84 84 75 71 57 95 38 43 22 25 61 30 40 68 84 48 51 34 72 43 65 63 70 67 46 75 62 40 62 36 57 69 47 95 95 56 63 87 63 76 76 83 88 74 68 51 92 32 51 44 30 70 60 58 77 95 47 41 45 77 72 81 77 58 88 55 81 87 56 67 67 96 70 96 96 84 81 90 96 96 96 96 ** 90 87 78 ** 81 84 78 78 87 87 90 90 ** 90 81 71 93 97 93 90 62 93 84 84 93 90 84 78 88 4321 39 39 85 92 39 50 71 32 75 89 82 92 89 75 64 96 32 50 10 3 78 25 57 71 96 17 42 25 75 50 57 50 50 46 35 82 71 28 67 35 56 4322 43 37 89 98 50 37 53 50 65 50 72 86 68 81 65 96 41 68 44 34 60 24 56 72 93 41 39 22 62 60 77 87 55 68 41 75 72 43 56 41 59 4361 60 33 ** ** 53 40 93 80 93 86 86 ** 80 86 ** ** 46 93 20 60 93 46 93 80 ** ** 40 86 93 60 80 ** 66 ** 86 80 60 ** 60 80 78 37 10 95 97 32 52 82 57 65 50 77 95 55 50 42 97 32 40 10 10 60 22 40 80 90 52 37 45 75 72 55 65 62 60 27 72 82 32 55 50 56 39 50 92 ** 52 71 86 63 68 60 92 94 65 63 50 94 28 52 42 15 78 28 76 86 97 86 39 50 84 76 76 60 71 81 68 84 78 23 57 39 65 OISU 51 52 91 96 51 53 71 62 69 67 81 90 73 69 63 95 43 58 35 32 72 41 56 76 91 55 45 45 78 64 74 73 62 74 53 82 77 50 63 51 65 4353 45 25 91 94 45 51 77 54 68 68 74 91 74 74 54 94 57 51 48 17 77 37 62 80 82 40 28 31 82 54 71 77 71 71 71 37 74 57 45 48 40 60 68 42 93 97 60 71 91 55 91 84 95 97 91 75 91 ** 57 71 44 33 86 66 86 95 97 73 48 82 93 88 88 95 84 82 53 88 95 75 77 62 78 4113 58 44 94 97 32 67 73 47 67 85 91 94 76 67 50 97 55 64 52 38 85 29 35 82 94 38 29 61 82 64 82 76 70 67 47 79 82 38 41 70 65 4210 52 36 ** 93 45 54 88 52 72 79 84 93 81 93 68 97 45 59 22 13 93 45 81 97 86 52 45 75 88 88 93 75 52 59 43 88 72 45 45 67 4230 59 40 94 96 59 70 86 69 68 13 83 9R 12 13 02 •• 45 54 30 34 82 39 16 81 93 61 51 55 86 81 84 75 65 68 54 84 75 65 64 64 70 4271 36 47 97 ** 52 56 90 70 56 77 88 ** 86 84 84 ** 56 70 59 29 95 68 72 68 97 84 43 56 95 59 86 93 68 75 45 81 86 72 65 52 72 86 81 91 97 70 89 86 91 91 83 •• 91 89 78 86 44 54 94 78 78 71 72 91 89 83 86 86 75 94 83 91 83 94 78 67 94 89 86 89 86 85 4410 52 61 96 ** 44 66 76 74 79 86 94 98 83 86 76 ** 62 61 40 49 89 55 66 91 94 57 79 54 96 84 84 94 76 86 47 89 77 67 83 57 75 4580 58 55 95 ** 55 59 78 50 79 81 82 90 77 60 76 97 39 60 40 40 76 42 67 89 85 59 43 47 83 81 84 79 60 75 52 83 71 53 72 40 68 4620 35 48 92 95 42 47 70 49 64 65 68 82 61 52 75 90 29 61 46 28 59 30 55 71 86 65 54 39 76 69 72 61 44 77 38 82 70 49 53 54 60 DISE 54 48 94 47 51 62 81 60 73 77 84 93 76 71 72 97 45 62 44 35 81 45 69 84 90 63 53 55 86 77 83 79 65 74 48 84 76 59 64 57 69 DISA 64 55 94 97 52 57 86 66 76 73 85 95 10 70 67 96 61 56 32 40 80 45 65 82 90 58 61 52 84 69 78 78 71 76 50 86 78 62 62 60 69 0188 62 55 90 97 64 60 79 57 74 68 81 90 75 66 65 95 50 56 42 37 76 43 58 80 90 55 52 52 80 72 73 68 66 66 48 80 77 52 62 53 67 DISC 52 52 93 96 54 62 82 65 11 11 82 92 12 12 65 91 47 51 34 34 13 39 65 19 90 52 50 49 83 69 17 10 69 66 45 84 79 47 64 55 66 51 52 91 96 51 53 77 62 69 67 81 90 73 67 63 45 45 58 35 32 72 41 56 76 91 55 45 45 78 64 74 73 62 74 53 82 77 50 63 51 65 DISE 54 48 94 97 51 62 81 60 73 77 84 93 76 71 72 97 45 62 44 35 81 45 69 84 90 63 53 55 86 77 83 79 65 74 48 84 76 59 64 57 69 5101 56 52 92 76 55 59 81 62 72 71 82 92 73 70 66 96 49 58 37 36 76 42 63 80 90 56 52 50 82 70 77 73 67 70 48 83 78 53 63 55 67



943 SC1 LEVE 4 FECKBOOB 11/07/80
PERCENTAGE OF CORRECT ANSWERS PER LICH
NOTE 130 PERCENT ON A PARTICULAR LICH IS INDICATED BY **

1 2 3 4 5 6 7 8 7 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 27 30 31 32 33 34 35 36 37 38 39 40 TOTAL SCHL 4160 69 50 94 94 50 58 77 91 86 83 72 86 66 75 72 91 50 44 8 66 80 50 50 66 83 88 44 72 72 97 72 83 80 55 75 44 86 80 58 52 55 69 4170 50 51 93 ** 62 51 ** 25 61 93 93 68 87 56 93 31 62 37 31 68 43 87 81 93 43 68 31 81 87 68 87 88 87 68 81 75 62 81 81 69 4173 40 33 88 96 40 55 88 74 62 70 85 96 62 70 55 ** 29 51 25 25 17 55 51 71 92 66 18 25 85 59 55 48 70 88 44 81 88 59 70 59 03 4220 76 47 ** 90 71 00 95 57 95 ** 85 ** 80 71 80 85 76 76 38 38 90 57 71 71 71 80 66 80 90 71 76 90 80 76 61 ** 80 52 61 76 76 4221 92 39 85 ** 25 42 64 39 50 32 67 85 50 39 50 96 50 28 17 21 57 14 42 46 75 32 32 14 71 57 57 57 50 53 46 78 53 25 42 28 50 4570 72 80 94 97 50 58 88 56 69 58 88 94 80 80 69 97 80 58 22 19 66 25 83 88 88 75 77 58 80 72 91 86 75 77 50 80 80 63 69 75 72 4571 43 45 96 96 51 45 88 50 87 90 85 96 71 75 77 98 46 61 25 41 88 40 58 90 95 40 58 46 82 66 75 83 80 75 45 85 85 85 59 48 54 68 88 83 98 94 72 69 83 63 86 80 88 88 88 83 58 69 80 15 55 36 44 91 58 17 91 75 55 63 47 75 80 77 83 52 69 52 88 88 86 75 61 73 70 57 98 ** 59 80 ** 91 87 85 96 ** 71 75 73 96 70 71 50 64 89 49 56 89 96 87 61 82 85 73 87 73 80 96 49 91 84 84 71 73 79 4241 30 43 ** ** 47 52 91 39 69 65 78 ** 34 65 39 ** 60 47 21 13 73 13 56 95 ** 34 69 56 91 65 73 86 86 82 56 86 65 39 30 43 62 4270 27 27 95 95 40 22 90 81 90 77 ** ** 86 81 63 ** 81 59 40 18 50 31 45 72 90 81 77 50 77 95 81 ** 68 72 59 90 72 63 63 63 69 85 48 88 96 33 44 81 55 37 51 77 ** 33 66 11 ** 22 14 14 14 88 55 74 70 92 33 44 25 92 62 85 66 55 66 11 88 77 70 59 51 58 4311 44 77 ** ** 38 55 88 77 88 72 77 ** 72 38 94 ** 83 61 44 27 77 27 17 88 94 72 66 66 94 55 77 83 61 55 61 72 61 61 72 33 70 4370 62 55 92 ** 55 22 51 55 48 22 59 92 55 40 66 ** 44 48 0 40 51 48 29 62 92 18 66 14 77 29 59 48 66 29 18 77 55 18 40 29 51 4371 75 02 ** 93 65 84 96 87 65 93 ** 96 87 84 84 ** 87 71 59 59 ** 65 87 ** ** 68 87 53 84 78 87 90 78 93 68 87 96 65 78 87 82 4430 79 ** ** ** 70 95 ** 87 95 83 95 ** ** 95 91 ** 83 87 87 70 95 83 ** 91 62 83 95 91 95 91 95 ** ** ** 83 95 95 83 91 015A 64 55 94 91 52 57 86 66 76 73 85 95 70 10 67 96 61 56 32 40 80 45 65 82 90 58 61 52 84 69 78 78 71 76 50 86 78 62 62 60 69 4330 66 58 95 95 66 66 66 54 54 70 95 87 37 33 66 ** 25 37 25 25 70 50 62 83 83 16 16 45 75 62 75 70 45 50 27 83 87 29 54 33 59 4031 31 37 87 ** 37 43 75 37 55 43 62 87 56 62 43 ** 62 31 6 37 68 25 6 87 93 31 31 37 81 50 68 37 68 37 12 75 68 18 50 18 51 75 79 92 ** 85 78 96 71 71 75 78 96 82 78 85 92 76 75 71 57 82 78 60 78 92 71 75 78 82 89 85 71 78 79 85 82 71 75 79 4082 83 71 83 ** 87 62 66 75 87 87 88 87 54 83 87 54 83 41 95 29 54 29 41 79 41 79 83 95 50 50 66 79 66 70 75 91 91 25 79 70 45 75 58 70 4290 51 31 83 98 55 51 85 35 62 70 77 87 77 61 51 96 31 40 24 18 74 31 40 72 83 35 29 38 74 74 64 74 57 62 53 70 72 51 55 50 58 4560 67 51 93 98 82 84 81 62 84 73 89 95 73 75 82 96 50 79 28 46 85 46 62 85 95 62 57 62 87 89 85 76 76 81 51 84 84 78 65 65 74 4561 50 44 83 ** 55 66 66 44 88 66 88 94 77 61 27 ** 22 33 50 50 83 33 66 72 88 38 44 38 94 44 61 77 33 44 27 94 88 38 38 61 61 4690 46 45 91 98 45 48 63 40 62 57 69 87 83 45 66 94 49 53 37 30 65 40 33 68 86 50 41 37 78 66 67 43 57 51 34 72 72 30 50 40 57 80 92 84 94 94 91 94 98 94 84 98 96 ** 94 90 94 88 92 15 75 88 48 71 88 94 90 82 67 78 71 80 76 78 92 88 94 84 78 75 67 84 38 33 88 94 44 55 94 66 66 66 88 83 88 94 50 88 38 55 50 44 72 44 83 88 88 44 44 55 86 77 72 +4 61 55 33 66 66 50 50 61 64 4151 59 49 88 94 57 04 82 56 63 57 74 82 72 58 50 93 37 55 40 33 79 33 51 74 83 48 43 50 70 65 0/ 58 70 57 50 71 68 49 60 43 61 4190 50 43 93 98 50 38 75 43 79 75 82 96 82 74 54 95 53 46 53 27 64 61 12 88 87 64 62 51 19 14 12 88 70 72 50 77 82 46 72 50 67 4192 92 84 97 ** 86 68 84 63 85 71 97 84 60 60 76 97 28 52 28 23 78 23 92 84 94 86 76 55 86 89 84 84 57 71 65 94 76 68 73 50 73 4200 68 68 90 ** 65 87 90 62 84 65 78 93 81 71 68 ** 75 46 46 12 62 28 59 90 93 28 46 53 93 65 65 1 53 56 25 90 81 43 81 62 67 4201 89 86 96 96 89 75 89 89 ** 93 93 96 68 82 86 ** 93 75 82 89 ** 89 75 93 96 89 82 86 89 96 93 12 96 93 75 93 96 62 75 82 88 4670 47 36 94 94 31 42 78 57 47 52 57 ** 57 57 36 ** 47 21 10 15 89 15 63 63 ** 31 47 31 73 52 63 42 68 42 15 84 68 36 36 73 54 62 55 90 97 64 60 79 57 74 68 81 90 15 66 65 95 50 50 42 37 76 43 58 80 90 55 52 52 80 72 73 68 66 66 48 80 77 52 62 53 67 4051 47 71 91 97 58 60 73 52 56 58 63 84 58 63 47 95 50 50 17 23 69 34 54 69 91 36 56 47 13 69 60 45 36 39 32 84 65 21 32 26 56 4130 35 31 94 98 29 50 79 77 74 59 94 98 59 68 57 ** 50 44 18 40 83 35 64 92 ** 61 24 64 87 75 83 62 81 68 31 88 92 75 68 64 66 4131 ** ** ** 89 84 ** 94 89 94 94 89 ** 84 78 ** 94 ** 89 94 94 78 89 89 94 89 89 78 ** ** 84 94 89 89 94 94 63 84 84 91 4140 63 70 96 90 53 66 90 56 60 60 76 96 76 70 53 ** 40 53 46 33 80 60 43 80 86 53 36 43 93 70 73 53 76 53 56 83 73 26 50 53 65 29 34 89 93 36 46 82 72 40 53 76 91 68 46 36 ** 36 31 17 17 72 31 36 57 67 68 48 36 74 40 63 48 44 48 34 68 68 25 53 42 53 4250 62 55 90 91 63 49 88 67 55 56 77 89 77 68 63 96 37 51 36 25 67 31 07 81 89 45 50 40 77 69 75 80 76 62 52 85 83 30 69 55 64 43 26 93 97 78 74 74 02 81 84 97 ** 98 77 45 95 44 41 25 21 10 32 70 86 97 29 49 53 87 10 87 78 69 83 64 87 84 48 78 79 69 47 21 90 96 49 32 80 54 72 58 69 89 51 69 75 96 41 58 29 37 51 24 65 69 91 57 45 32 81 64 75 67 63 65 31 83 76 45 63 45 60 16 76 96 96 53 50 88 92 92 96 84 ** 96 69 92 ** 16 88 46 57 69 57 80 65 88 65 73 38 84 84 84 96 73 50 46 76 92 53 80 69 76 40 45 90 ** 65 85 ** 85 40 70 95 90 ** 40 65 ** 65 40 5 50 60 25 20 85 75 65 20 70 85 55 75 20 60 45 20 85 60 80 45 60 62 4400 >3 30 91 92 46 15 88 46 12 88 81 84 52 79 59 91 44 59 24 31 81 26 53 84 85 42 47 59 85 62 85 89 72 82 47 79 72 47 76 60 66 4550 88 ** 92 ** 88 88 88 35 35 85 92 96 85 88 85 ** 74 59 7 11 92 51 81 88 88 59 3 55 92 88 88 96 25 88 74 96 74 62 70 66 76 4022 37 17 82 93 44 68 55 51 65 65 65 86 62 65 62 82 58 37 37 20 75 62 68 58 79 31 37 43 75 68 68 41 62 27 20 79 62 31 13 34 56



SCIENCE - LEVEL 5

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Skills/Processes (4 items), Life Sciences (13 items), Human Biology/Health (3 items), Physical Sciences (10 items), Earth Science (5 items), and Astromony (5 items).

The population includes all students enrolled in grade 5 who took an on-level test and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed only fairly well on this test with a system-wide average score of 67%. Generally, students appear to be mastering the objectives in the domains of Skills/Processes and Astromomy and most of the objectives tapped in Life Science and Human Biology/Health. Within these latter two domains there are isolated objectives which are not being mastered by more than fifty percent of the students. In Life Science students are having difficulty knowing the interactions needed for photosynthesis (item # 11) and in Human Biology/Health students students are not clear on the difference between an artery and a vein (item # 19).

The most severe deficits as strands lie in Physical Science and Earth Science where of fifteen items, there are seven that fewer than fifty percent of the students answered correctly. In Physical Science students are having difficulty with materials that cause sliding friction, with identifying materials that are good and bad conductors of heat, identifying simple machines, and describing how white light can be separated into colors (item #'s 22, 24, 28, and 30). In Earth Science students are having difficulty identifying the use of a barometer, the effect of geological forces on the earth's surface, and types of fossils (item #'s 32, 34, and 35).

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL SCIENCE - LEVEL 5

1985 - 1986

B.3	Identify appropriate measuring instruments & units of measure	 -	
B.7	Measure temperature to nearest degree in Fahrenheit & Celsius	2	1
B.9	Make estimates of length, mass, temperature, time or volume	3	ļ
B.11	Record info. in form of sketches, graphs & interpret	4	1
D.20	Cell is basic unit of all living things	5	ļ
D.11	Classify animals as vertebrates & invertebrates; 5 kinds vertebrate	6	1
D.12	Identify adaptations in a given animal's body	7	i
D.21	Smallest protista has single cell; larger animals millions of cells	∞	
D.26	Survival of insects, fish & plants that are food of many animals	ပ	1
D.6	Recognize various parts of a flower & function of each	0 -	j
D.7	Process of photosynthesis to produce starch (glucose)		l
D.10	Identify similar life functions of many animals	21	i
D.11	Classify animals as vertebrates & invertebrates; 5 kinds vertebrate	ч	Ì
D. 17	Describe various types of animal and plant behavior	4 1	
D. 7	Process of photosynthesis to produce starch	5 H	
D.9	Identify basic conditions for & stages of, seed germination	6	
D.30	Humans are cared for & protected by parents longer than any animal	7	
E.7	Identify brain as control center of the nervous system	∞⊢	
E.10	Identify difference between artery and vein	9 1	
E.9	Heart beats faster when we exert ourselves & slows when we rest	0 %	
F.20	Examples of materials that are electrical conductors	2	
F.25	Materials that cause sliding friction & others that cause little	2	
F.1	Identify the characters of three kinds of matter	3	
F.14	Identify materials that are good & bad conductors of heat	2	
F.15	Group objects that are magnetic and non-magnetic	5	
F.18	Workings of an electrical switch	2	
F.20	Examples of materials that are electrical conductors & insulators	2	
F.22	Six simple machines that are sued in everyday situations	8 2	
F.26	Earth's gravity pulls objects straight down toward center of plane	9	
F.32	min in a commence and site observations	03	
G.5	Define humidity as the amount of moisture in the air	 ∨	
G.11	Identify a barometer as an instrument that measures air pressure	2	
G.3	Describe how the water cycle works	33	
G.15	Earth's surface is being built up & worn down by geological forces	43	
G.18	7	Q 24	
H.8	Identify constellations as group of stars	3	
H.7	Sun is part of the Milky Way galaxy, which contains billions stars	3	
H.3	What cur solar system contains besides the sun and planets	8 3	
H.5	Earth is almost certainly only planet that can sustain life	3	
H.6	Sun and Earth's size	0	
			I



953 SCI LEVL 5 TECR5005 11/07/86
PERCENTAGE OF CORRECT ANSWERS PER LIFM
NOTE 100 PERCENT UN A PARTICULAR TIEM IS INDICATED BY **

SCHL 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 a1 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL 95 95 55 ** 60 55 93 74 67 74 76 97 76 62 76 90 86 86 41 93 83 62 33 83 93 93 76 55 76 62 86 81 67 55 93 79 97 93 93 62 78 4160 88 ** 70 ** 58 58 76 35 52 58 29 88 47 41 58 88 73 35 11 94 70 11 76 35 ** 88 58 35 94 11 58 58 64 41 47 70 76 70 94 64 62 4173 95 ** 70 95 50 55 90 75 65 50 20 85 20 65 20 70 65 40 35 95 75 40 65 10 ** 85 75 25 85 15 60 50 70 10 40 70 90 75 95 65 61 ** ** 68 ** 75 63 87 50 62 75 31 ** 93 75 50 50 87 18 0 ** 87 50 81 31 ** 75 81 31 ** 31 61 43 43 6 18 50 93 ** 87 93 67 91 ** 82 82 80 78 56 65 60 26 95 69 65 39 02 80 69 56 91 73 30 05 65 86 69 86 52 82 60 73 34 52 26 43 47 73 73 82 56 67 80 ** 68 86 60 68 76 44 50 52 23 84 39 44 63 42 71 55 26 94 78 65 63 44 86 73 76 23 73 52 57 13 36 15 39 18 52 73 89 60 59 94 98 84 96 84 78 90 76 72 88 62 94 74 80 54 78 90 66 48 98 88 40 96 70 96 90 88 50 98 50 82 60 62 44 66 68 90 92 98 76 77 96 ** 66 89 78 52 70 55 58 56 52 87 56 61 61 84 75 46 20 95 78 35 69 16 93 81 75 36 84 29 55 23 29 33 38 60 72 75 92 56 62 4010 82 98 69 93 65 50 88 69 51 59 19 85 75 52 55 86 92 64 46 94 78 15 76 27 88 85 77 21 86 38 71 56 53 39 32 69 89 89 92 46 65 4240 88 ** 88 ** ** ** ** ** 66 ** ** ** 88 ** 77 ** 77 88 ** 77 22 ** 88 ** ** 88 0 77 88 77 66 66 88 66 11 ** 86 ** 77 84 4241 94 ** 78 94 ** 68 84 89 84 89 84 ** 84 73 94 ** ** 89 89 94 84 84 ** 78 ** ** 84 84 78 78 89 84 73 94 ** 68 ** 94 ** 84 88 4270 93 ** 93 ** 81 93 ** 81 93 93 50 ** 75 50 75 93 ** ** 68 ** 87 75 93 75 93 87 81 50 81 62 75 18 68 43 62 50 87 75 ** 87 80 4311 ** ** 95 30 90 85 ** 80 66 95 71 ** 90 85 90 90 ** 76 71 90 76 71 95 28 ** ** 85 71 95 23 71 42 52 4 23 38 85 95 90 61 77 94 ** ** 88 77 94 88 22 94 88 83 ** 94 77 94 ** 94 88 83 ** ** 86 88 88 ** 94 88 88 ** ** ** 22 83 88 16 11 55 61 72 16 80 4370 90 95 81 ** 68 68 86 77 90 36 54 95 77 72 59 90 ** 81 54 ** 95 59 95 40 ** 81 86 18 95 36 68 81 50 13 72 63 90 90 ** 72 74 ** ** ** 80 80 80 ** 90 90 90 80 ** 80 90 80 80 90 90 63 90 ** 80 80 70 90 ** 70 80 ** 90 70 80 80 50 60 90 90 80 ** 90 85 92 98 75 93 73 65 85 65 66 68 48 92 69 64 63 85 86 65 44 95 82 46 81 47 93 86 79 41 87 46 71 49 54 38 50 57 82 83 92 63 70 ** ** 60 ** ** 80 ** 93 80 80 46 ** ** ** ** 93 93 ** 86 66 ** 86 80 73 66 ** 93 66 53 ** 86 46 86 73 66 93 93 ** ** 86 73 85 4030 ** ** 84 92 53 69 92 84 76 84 23 92 38 84 38 53 53 46 15 92 76 23 69 38 92 92 84 30 84 30 76 51 38 38 15 69 53 92 76 46 64 4031 ** ** ** 96 ** ** ** 96 ** ** 92 ** 84 80 96 ** 96 19 96 96 92 ** 69 ** ** 96 26 ** 26 ** 84 92 80 61 65 92 96 84 53 86 75 87 62 87 ** 93 68 ** 56 ** ** 87 ** 37 ** 75 68 31 12 93 62 50 68 18 81 62 68 ** 68 ** 37 31 62 6 43 50 15 62 68 68 68 93 98 81 96 82 81 79 77 58 67 51 86 58 67 81 82 87 46 17 93 87 41 77 27 91 81 89 12 87 51 65 15 62 24 32 43 79 81 91 68 67 97 ** 88 91 93 91 82 77 73 77 77 95 40 68 55 84 88 68 31 ** 86 37 91 42 88 95 86 35 95 68 48 51 57 33 48 60 82 93 93 82 74 76 95 57 95 76 80 ** 80 80 52 47 90 85 57 66 80 95 52 28 ** 80 14 80 28 95 76 76 47 85 61 66 42 42 14 38 52 71 76 95 80 68 90 98 84 84 66 61 83 53 57 52 23 95 33 35 38 81 84 47 11 92 61 47 74 28 81 61 57 28 71 43 46 28 47 14 32 32 47 71 81 40 56 96 96 63 87 42 48 78 57 72 60 51 75 48 48 54 69 81 65 36 93 72 39 78 48 81 69 69 45 69 51 75 45 66 54 63 57 57 57 78 51 64 72 86 68 90 81 68 81 50 72 45 22 77 72 22 54 77 72 54 31 77 72 54 72 54 81 72 63 68 81 31 68 50 40 31 31 63 54 81 90 68 62 92 98 78 91 73 59 85 70 56 64 38 92 67 59 46 84 85 63 32 94 77 66 77 46 98 87 71 57 80 53 76 47 47 40 52 28 74 87 90 49 68 86 96 84 90 92 59 78 76 55 55 40 92 78 69 67 94 80 51 34 98 80 67 84 63 90 94 69 51 86 59 48 28 65 32 46 51 55 73 92 71 69 96 ** 88 ** 30 61 88 61 57 61 34 92 61 57 46 80 76 42 23 88 88 30 84 46 96 80 84 42 96 50 42 46 65 46 42 57 73 92 ** 92 67 93 ** 93 ** ** 87 93 81 62 93 75 93 87 87 81 93 93 87 68 ** ** 68 93 93 ** ** ** 87 93 87 87 75 62 56 ** 87 ** ** 93 93 88 4200 4201 88 ** 88 96 85 62 ** 70 66 88 37 96 70 59 88 96 74 31 48 96 92 77 81 22 70 85 74 66 85 55 66 85 40 40 33 29 40 85 81 48 70 89 ** ** 94 68 78 89 42 68 ** 52 78 63 31 73 68 68 ** 5 ** 78 26 63 31 94 68 68 ** 78 31 47 ** 68 5 26 89 78 94 84 57 69 91 47 81 42 77 70 85 71 65 68 48 90 63 58 62 83 83 58 27 94 80 52 80 43 89 81 76 46 84 53 61 47 57 34 45 50 68 82 87 62 68 96 ** 73 83 60 70 83 60 66 60 56 90 50 50 46 56 83 83 83 43 92 73 86 73 90 90 83 53 20 86 53 26 26 20 13 20 3 10 83 26 59 72 96 60 93 45 69 87 63 57 18 9 93 54 60 51 60 75 24 48 93 78 30 75 27 70 72 84 27 81 51 60 72 27 12 24 63 63 84 93 39 60 70 95 62 83 37 62 75 20 58 25 20 91 20 62 50 79 79 41 20 91 79 0 45 29 87 79 62 20 75 25 41 4 37 16 16 41 54 75 79 45 51 84 96 61 ** 30 57 73 30 38 23 15 88 19 38 46 76 84 15 11 96 80 57 57 42 69 88 73 15 69 15 42 15 46 19 30 38 34 61 80 30 51 6° ** 29 94 67 56 86 89 81 81 75 91 64 56 56 83 75 21 13 91 89 56 81 40 91 86 75 54 86 70 62 35 72 67 72 54 59 86 89 64 70 90 ** 82 92 64 66 94 60 52 74 62 ** 80 72 78 80 84 68 32 94 76 56 84 50 84 78 66 52 84 62 50 48 70 32 40 58 82 78 70 62 69 4250 93 ** 82 91 53 30 89 60 73 57 23 93 82 39 60 94 86 63 28 98 89 45 82 58 95 91 98 32 91 78 61 32 53 20 63 72 86 97 95 91 71 86 ** 63 93 77 72 77 72 48 51 27 84 33 68 41 77 77 45 27 91 75 46 69 43 87 76 74 32 81 30 60 47 45 32 32 40 56 77 75 61 61 ** ** 73 95 78 78 91 91 86 65 56 95 78 56 56 91 95 78 73 ** 91 56 86 65 95 95 91 39 °5 30 82 60 56 26 65 47 86 73 86 60 75 ** ** 93 ** 60 93 86 ** 53 53 33 93 80 60 86 73 93 60 53 ** ** 73 73 40 93 80 86 40 86 66 40 60 53 6 26 73 86 66 93 53 71 4391 93 ** 73 90 77 66 84 81 71 71 35 93 63 61 63 75 86 63 35 97 71 38 86 28 91 86 81 25 90 27 75 43 67 30 34 47 57 84 94 70 67 ** ** 65 96 53 42 92 69 92 69 23 92 19 92 30 88 92 57 23 ** ** 92 96 42 92 53 69 30 84 15 73 19 38 7 53 34 42 73 96 34 63 4022 ** ** 77 77 44 66 88 44 55 44 66 ** 55 22 55 88 77 33 0 ** 88 33 88 11 ** 88 66 33 ** 44 55 11 11 0 22 55 55 66 88 44 59



233

953 SCI LEVE 5 TECR5005 11/U1/30
PERCENTAGE OF COPRECT ANSWERS PER FILM
NOTE 100 PERCENT UN A PARTICULAR ITEM IS INDICATED BY **

SCHL 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 1d 19 20 21 22 23 24 25 26 27 28 29 30 36 37 36 37 36 39 40 TOTAL 4052 86 ** ** 93 86 86 ** 53 93 80 33 93 33 80 66 80 86 53 53 ** 80 13 86 60 ** ** 80 60 93 20 80 53 46 20 46 40 66 60 93 93 71 4100 95 98 83 96 77 80 91 86 72 86 51 88 61 86 60 83 88 70 53 ** 96 61 66 56 96 88 92 32 67 66 71 54 67 35 50 55 59 86 87 71 75 4120 ** ** 90 45 85 35 85 40 66 14 66 85 66 76 47 95 90 66 57 ** ** 42 76 42 95 95 90 61 30 90 42 14 28 61 66 47 90 95 95 76 72 4121 72 ** 63 ** 72 54 63 45 63 81 36 90 27 81 24 81 20 20 30 90 18 90 9 ** 90 72 9 81 9 27 36 36 18 9 18 5 63 ** 45 58 4531 88 74 82 ** 82 70 87 70 70 70 17 88 76 41 58 38 76 23 11 94 76 17 64 35 76 76 41 17 82 23 35 23 58 5 52 35 52 76 76 47 59 4590 92 ** 61 97 79 64 92 71 51 64 64 84 82 66 79 92 89 61 41 92 82 79 71 38 92 84 79 35 71 74 69 33 69 43 53 41 84 87 97 35 71 4592 ** ** 75 ** ** ** 50 ** 75 25 ** 75 ** ** ** ** ** 25 ** 50 75 75 ** ** 75 25 ** 50 0 75 50 50 0 ** 75 75 75 76 46 0 96 ** 78 92 72 75 86 89 83 01 56 92 69 64 50 06 92 69 13 98 92 58 76 41 96 80 73 53 96 52 52 33 50 18 50 55 60 90 89 63 70 DISC 91 99 73 93 68 65 86 72 67 62 42 91 60 63 59 80 85 58 34 96 84 52 78 46 91 83 78 37 86 49 60 41 53 30 44 51 64 80 88 62 68 4260 89 ** 12 96 82 12 02 68 75 86 41 89 55 51 37 72 75 82 13 ** 82 44 89 20 96 75 05 31 93 34 51 34 48 13 44 41 86 89 96 72 06 4280 95 ** 95 ** ** ** 95 ** ** ** 95 ** ** ** ** 90 ** 76 ** ** 90 95 ** ** 45 95 95 85 95 95 95 95 95 61 85 85 85 86 88 90 4283 97 98 06 94 52 50 79 07 50 09 49 94 58 47 54 77 73 60 32 84 60 41 67 13 84 71 75 47 83 37 50 56 39 28 35 60 58 83 71 54 62 4301 ** ** 80 ** 73 80 86 86 20 80 6 60 26 26 40 80 80 53 13 86 60 31 80 26 93 73 ** 20 66 6 40 26 46 13 20 20 73 60 93 46 57 84 97 67 86 71 52 86 50 59 46 20 84 33 45 50 85 64 33 4 95 76 33 76 17 90 73 71 17 82 41 48 25 50 20 21 40 53 82 88 55 57 90 98 73 94 68 81 90 65 62 59 44 93 63 66 54 77 80 46 37 96 84 45 17 44 96 84 81 44 90 51 75 47 63 27 55 60 70 82 93 66 69 4062 97 ** 91 97 97 91 97 94 85 91 91 ** 82 94 82 50 ** 91 88 ** 97 82 97 79 ** 97 91 41 97 88 94 82 55 32 94 70 97 91 91 67 86 4321 45 ** 81 ** 77 77 ** 54 54 50 22 86 68 54 50 86 95 40 4 ** 81 40 86 22 90 90 77 36 90 27 50 13 40 4 40 45 40 77 86 63 62 43.22 89 ** 60 43 50 83 87 52 54 47 27 85 50 39 44 85 56 45 25 91 68 22 83 22 91 79 58 31 81 20 41 33 52 25 20 54 66 85 91 68 59 4361 88 🖛 82 82 70 41 82 64 76 58 41 94 35 35 82 88 82 64 47 88 64 11 88 35 82 94 88 17 88 17 52 11 35 11 5 64 70 88 94 70 62 4541 86 93 08 86 36 40 80 45 45 45 13 90 9 50 27 72 81 40 0 ** 68 36 81 13 86 81 72 40 90 22 63 13 36 18 22 36 50 77 72 31 53 4543 ** 12 76 96 36 88 88 52 60 28 16 68 36 24 52 80 84 16 0 ** 88 32 72 8 76 76 76 20 80 32 64 20 60 16 16 48 48 80 92 36 55 DISD 91 98 73 93 67 71 88 63 62 60 39 88 52 53 57 78 77 52 28 94 77 42 80 31 91 81 76 35 86 42 59 38 52 23 38 53 65 83 88 58 65 4353 93 ** 68 ** 72 55 96 89 51 51 65 96 65 72 72 66 82 51 37 96 72 65 89 27 93 89 79 31 93 79 37 44 3 24 79 86 58 93 55 68 4161 47 ** 79 95 76 69 90 93 69 69 60 ** 76 55 39 86 97 58 13 97 88 2 81 27 95 81 74 16 93 39 48 37 48 34 51 74 88 86 95 76 69 4113 ** ** ** 95 95 ** 90 54 ** 90 9 90 18 27 36 90 90 59 13 ** 90 68 81 68 ** 90 90 40 86 40 68 27 50 13 31 45 54 90 81 90 69 4210 92 ** 57 97 62 70 90 62 75 90 42 90 32 60 80 82 92 55 27 ** 70 30 80 25 90 85 80 10 80 87 37 5 40 10 20 45 82 87 90 75 64 4230 95 97 72 94 68 62 84 63 62 62 36 90 41 59 60 75 80 55 14 93 88 40 81 30 91 80 74 33 78 35 51 25 50 16 26 54 54 81 81 57 62 4271 ** ** 86 97 66 72 97 80 83 63 41 94 63 77 80 80 97 66 55 97 83 16 88 50 91 77 94 44 ** 41 72 38 52 30 38 80 94 97 97 86 75 4360 93 97 64 93 68 68 79 12 47 77 25 97 54 47 65 93 88 50 18 95 79 31 90 36 93 81 79 18 81 40 43 22 47 31 36 63 40 75 88 54 63 4410 96 98 69 95 88 82 85 88 93 95 61 ** 65 76 73 88 88 58 46 98 90 66 87 39 93 85 84 33 84 50 50 12 49 15 36 47 65 87 93 52 71 4580 96 98 84 70 62 61 88 68 54 62 34 87 49 53 52 77 91 50 35 95 88 41 82 36 94 78 84 32 78 36 58 38 51 13 40 47 62 82 89 50 64 84 98 67 89 78 59 77 56 55 66 31 77 38 43 57 76 68 58 28 90 67 39 61 39 81 61 79 33 73 28 56 17 43 26 37 36 45 64 77 55 58 DISE 93 98 74 93 77 66 86 70 65 70 39 90 49 57 61 81 85 57 28 95 82 41 80 36 91 79 80 30 82 42 52 25 48 19 34 53 62 79 87 69 65 UISA 92 yu 75 93 73 65 85 65 66 68 48 92 69 64 63 85 86 65 44 9° 82 46 81 47 93 86 79 41 87 46 71 49 54 38 50 57 82 83 92 63 70 DISB 91 97 81 92 77 70 85 71 65 68 48 90 63 58 62 83 83 58 27 94 80 52 80 43 89 81 76 46 84 53 61 47 57 34 45 50 68 82 87 62 69 0150 91 99 73 93 68 65 86 72 67 62 42 91 60 63 59 80 85 58 34 96 84 52 78 46 91 83 78 37 86 49 60 41 53 30 44 51 64 80 88 62 68 0150 91 98 73 93 67 71 88 63 62 60 39 88 52 53 57 78 77 52 28 94 77 42 80 31 91 81 76 35 86 42 59 38 52 23 38 53 65 83 88 58 65 0156 93 98 74 93 72 66 36 70 65 70 39 90 49 57 61 81 85 57 28 95 82 41 80 36 91 79 80 30 82 42 52 25 48 19 34 53 62 79 87 60 65 STUT 191 98 75 93 71 67 86 69 65 65 43 90 58 59 60 81 84 58 32 95 81 47 79 41 91 82 78 38 85 47 60 39 53 39 42 53 67 81 88 61 67



SCIENCE - LEVEL 6

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Skills/Processes (4 items), Life Sciences (11 items), Physical Science (15 items)), Earth Science (8 items), and Astronomy (2 items).

The population includes all students enrolled in grade 6 who took an on-level test and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 51%. Generally, students appear to be mastering most of the objectives measured by Physical Science; however, there are three items with which students have difficulty. One of the items addresses the movement of heat to a cooler place (item # 20), and the other two items tap knowledge of machinery and types of levers (item #'s 24 and 25).

On the other domains students performed poorly, of the remaining twenty-five items, there are sixteen which fewer than fifty percent of the students answered correctly. In the domain of Skills/Processes students have difficulty with measuring weight and volume in English and metric units (item #'s 2 and 4). This weakness was also displayed in the Mathematics test at Level 6. In Life Sciences the difficulties lie with identifying the parts of a flower, stages in life cycles, cell or membrane, cell division, an ecosystem, and current species in danger of becoming extinct (item #'s 6, 9, 10, 12, 13, and 15). In the domain of Earth Science students are not mastering the concepts of various aspects of the weather and geology (item #'s 31, 32, 34, 35, 36, 37, and 38). In Astronomy students are unable to identify the latest scientific theory on the origins of the universe (item #39).



DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL SCIENCE - LEVEL 6

1985 - 1986

B B B D D D D D D D D D D F F F F F F F	All matter is made up of tiny particles called atoms When substances are heated, atoms move around quickly & expand lentify advantages & disadvantages of forms energy in use today Principle that heat moves from a warmer to a cooler place A wire with electricity passing thru has a magnetic field Current electricity consists of a flow of electrons along a path Identify compound machines ework in the city around us Distinguish between the three classes of levers Earth's gravity is the force that pulls all matter down Sound is a form of energy that is produced 'y a vibrating object Contrast the loudness of a sound with the pitch of a sound Properties of light Identify the sequence of colors in the spectrum Distinguish between weather & climate in 2 cities Factors that determine the type of climate & weather Describe the conditions that lead to forms of precipitation Low barometric pressure is associated w/poor weather, high/good Identify common weather instruments & what each measures Faults in the Earth's crust are primary cause of earthquakes Describe the destructive effect of topsoil erosion Latest scientific theory of the origins of the topsoil	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
		1	



-182-

963 SCI LEVI 6 TECRSOOS 11707/86
PERLINTAGE OF LOURELT ANSWERS PIR ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

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SCIENCE - LEVEL 7

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Skills/Processes (6 items), Science/Society (2 items), and Physical Science (32 items).

The population includes all students enrolled in grade 7 who took an on-level test and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed very poorly on this test with a system-wide average score of 49%. Generally, students seem to be mastering the objectives in Science/Society and most of the objectives in Skills/Processes. In this latter domain students are having difficulty with objectives tapping measuring temperature in Fahrenheit and Celsius and using laboratory equipment (item #'s 2, 4, and 5). The weakness in knowing temperature readings was also found in the mathematics test at Level 7.

The most severe deficits as a strand lie in Physical Science where of thirty-two items there are twenty-one that fewer than fifty percent of the students answered correctly. The areas of difficulty were in the general properties of matter (item #'s 9, 11, 14, 15, 18, and 19), in combinations (item #'s 20, 21, and 22), in energy and heat (item #'s 23, 24, and 25), in electricity and magnetism (item #'s 28, 29, 30, 31, 32, and 33), and in mechanics (item #'s 35, 37, and 38).



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DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL SCIENCE - LEVEL 7

1985 - 1986

B.4 Appropriate measuring instrument & unit of measurement Measure temperature in degrees Fahrenheit & Celsius B.14 Record info. in form of sketches, graphs, charts, tables, etc. Use and maintain laboratory equip. & safety hazards of some B.15 Major aspects in the scientific method in experiments C.1 Difference between science & technology ("pure" vs. "applied") C.12 Identify at least 10 science-related vocations & avocations F.1 Identify general properties of matter, (volume and mass) The three state of matter; colid limits.	
1 · · · · · · · · · · · · · · · · · · ·	
F.3 Weight of an object changes as gravity changes, mass does not F.8,10 Define an atom, what they look like, For F.10 see below F.8,9 For F.8 see above. Sketch of a helium atom.	
F.10 Make a sketch of a single atom, numbering element from 1 to 20 F.13 Define elements as the basic building blocks of matter F.19 Identify groups & periods on the Periodic Table F.22 Identify where metals, non-metals & inert elements are on Table	
F.29 Distinguish between physical changes and chemical changes F.32 Identify various output from chemical interactions F.33 Principles of conservation of matter and energy F.34 Examples of different forms of energy	
F.35 Frace the energy in a given situation back to original source F.37 Compare & contrast temperature and heat Lines of force of two attracting & repelling magnets F.39 Identify three methods of heat transfer; give examples of each F.41 Classify materials as magnetic and non-magnetic	
F.43 Describe the way in which a DC electric motor works F.44 Describe the way in which a DC generator works F.45 Ways that staic charges are produced & define their polarity F.46 Recognize how objects acquire a positive or negative charge F.49 Ohm's Law; explain a simple electrical circuit carrying current F.51 Role of switches force & electrical circuit carrying current	
F.51 Role of switches, fuses & circuit breakers in home & industry F.60 Describe machines, simple & compound, as devices F.61 Describe everyday uses of the six simple machines F.66 Define gravity, finition & inertia F.74 Describe the basic properties of sound	
F.78 Compare speed of sound in the air with the speed of light F.86 White light is made up of spectrum of different-colored light	



973 SCI LIVE 7 TECKSOUS 11/07/46
PERCENTAGE OF CURRECT ANSWERS PER LIEM
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SCIENCE - LEVEL 8

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Experiences (1 item), Skills/Processes (3 items), Science/Society (2 items), and Life Sciences (34 items).

The population includes all students enrolled in grade 8 who took an on-level test and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 50%. Generally, students seem to be mastering the objectives in Science Experiences and most of the objectives in Skills/Processes. In this latter domain students had difficulty with recording information in the form of sketches, graphs, etc. and in interpreting data (item # 2).

The most serious deficits as strands can be found in the domains of Science/Society and Life Sciences where of thirty-six items there are nineteen which more than fifty percent of the students are answering incorrectly. In Science/Society students are having difficulty recognizing the differences between science and technology and the impacts of recent scientific/technological advances (item #'s 5 and 6). In Life Sciences students are not mastering items addressing micro-organisms (item # 7), plants (item #'s 9 and 13), animals (item #'s 21 and 23), cell theory (item #'s 26 and 28), anatomy (item #'s 28, 29, 30, 31, and 33), classification (item # 34), evolution (item #'s 36 and 37), and heredity (item #'s 38, 39, and 40).



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DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL SCIENCE - LEVEL 8

1985 - 1986

A.2 Field trips use to find out a great deal about one topic % assure weight in English and metric units Record info. in torm of sketches, graphs, etc., interpret data B.13 Record info. in torm of sketches, graphs, etc., interpret data B.14 Bajor aspects of scientific method in experiments C.1 Differences between science & technology ("pure" vs. "applied") C.2 Difference between viruses & bacteria, basic characters of each 4 types of protozoans, major characters & importance to humans D.5 Structural diffs. wiscular and non-vascular plants D.5 Structural diffs. wiscular and non-vascular plants D.6 Process of photosynchesis D.7 Identify structures & functions of major parts of plants D.13 Diff. between plants, animals, protists, monerans & fungi D.14 Distinguish between air- and gill-breathing animals D.15 Compare & contrast the major phyla of animal life, give example D.20 Sequence of stages in growth & development of a higher insect D.21 Identify the kinds of animals that reproduce by fission D.23 Describe the function of various forms of animal behavior D.24 Identify the ways a particular organism provides for its needs Recognize the cell as the basic unit of all living things D.2 Identify main parts of a typical cell as seen thru a microscope and state their functions D.20 Describe the 2 kinds of cell division: mitosis & meiosis D.21 Describe the organism & contrast to living things that are not D.22 Describe the 2 kinds of cell division: mitosis & meiosis D.23 Describe the 3 contrast to living things that are not D.24 Carolus Limnaeus developed modern system of class of organisms D.25 Contribution of Parwin & Wallace to develop theory of evolution D.26 Contributions of Gregor Mendel to science of heredity D.27 D.27 Describe time to the same species D.28 Diperson of the cells of all living things D.29 Describe in the cells of all living things D.20 Contributions of Gregor Mendel to science of heredity D.20 DNA is present in the cells of all living things				
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PERCENTAGE OF CORRECT ANSWERS PER 1 TEM
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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TUTAL SCHI 54 60 29 81 32 32 28 47 47 43 60 54 12 50 72 75 48 65 51 65 21 59 27 78 30 58 8 39 48 40 55 50 27 65 51 43 21 42 39 47 2170 85 85 31 85 26 63 32 52 40 62 71 44 59 81 60 71 87 82 77 64 38 68 52 70 62 28 55 10 12 47 38 49 38 10 65 29 46 30 36 22 52 4570 78 71 76 91 17 76 86 73 65 78 69 78 8 60 82 91 86 73 65 73 8 60 60 52 73 47 34 21 26 69 69 52 60 60 21 69 47 43 60 69 61 2360 96 75 46 96 28 25 46 08 76 76 65 59 81 93 90 71 58 61 53 64 71 84 81 53 75 56 56 61 68 65 34 87 96 68 87 90 46 96 70 2010 84 72 52 92 54 54 41 51 54 61 55 62 45 54 81 75 61 81 64 43 55 11 41 64 15 32 64 29 29 52 58 56 43 43 15 51 49 39 41 31 51 18 66 13 42 30 50 31 54 64 62 74 60 39 46 65 65 62 18 81 46 24 69 21 74 66 54 60 25 28 48 53 60 54 42 77 39 48 62 40 36 54 DISA 78 73 40 89 36 51 40 55 53 60 65 56 41 60 72 76 70 77 68 57 37 70 41 71 71 36 59 21 28 52 50 55 45 35 70 47 49 40 43 39 54 88 86 17 86 65 77 54 56 56 10 61 61 59 47 81 12 63 75 70 63 70 65 52 52 52 36 47 29 43 61 72 56 63 45 75 54 50 50 51 45 61 2120 79 73 9 85 14 47 20 50 55 60 65 52 9 49 63 69 42 50 66 52 65 68 12 69 79 36 52 17 19 53 36 63 50 60 57 44 46 20 33 38 48 2140 66 73 34 86 48 53 28 67 47 46 57 55 28 46 71 65 51 82 49 49 34 74 24 69 74 29 58 27 30 52 44 57 39 29 72 46 37 29 30 27 49 64 64 33 75 37 29 38 59 46 55 24 40 22 35 75 59 37 66 55 55 16 50 24 68 44 40 57 3 14 29 31 44 53 18 55 29 38 29 18 25 41 2950 76 71 21 83 29 48 20 68 47 37 33 33 16 45 51 58 54 68 45 4) 29 54 19 68 56 27 43 17 23 35 33 52 43 19 66 45 25 30 31 25 42 74 72 29 83 36 49 28 63 49 48 45 45 23 45 64 63 50 70 53 49 38 62 23 67 62 31 50 19 25 44 40 54 46 30 66 44 36 30 32 30 47 2330 42 53 27 79 27 23 23 47 39 46 51 40 19 41 55 55 57 63 51 49 27 46 33 69 58 28 59 6 15 37 30 48 48 26 67 34 27 20 26 21 40 2080 19 45 23 82 32 45 6 42 21 39 46 47 5 21 61 60 68 64 41 72 21 45 28 82 67 38 46 24 17 30 49 52 34 60 82 35 24 27 27 23 41 2180 62 61 20 85 33 49 27 58 63 57 59 50 36 69 75 64 67 74 54 52 17 59 49 62 70 42 67 6 34 62 49 61 54 41 45 47 43 43 36 34 51 2090 41 73 22 89 30 34 16 52 38 40 58 37 16 46 66 85 70 65 61 50 33 67 41 74 66 37 62 12 24 42 46 62 34 31 83 35 38 33 27 40 47 2190 68 73 43 80 42 48 19 54 62 64 62 44 29 55 68 72 75 65 66 40 41 66 28 74 66 38 49 43 25 40 57 60 60 37 74 43 40 35 40 35 52 2260 72 59 16 70 32 45 25 71 20 37 62 47 16 59 52 64 30 64 45 38 35 71 20 72 69 66 61 8 18 44 62 55 57 49 88 42 16 27 33 55 47 DISC 51 6u 24 82 32 3d 20 53 42 49 56 44 22 49 63 65 63 66 54 50 29 57 35 71 65 38 58 15 23 43 45 56 49 37 69 39 33 31 31 32 46 2010 52 69 38 87 44 40 22 74 46 49 54 48 49 58 81 65 65 77 65 39 38 54 54 65 83 61 70 39 37 54 54 61 64 59 79 41 66 56 49 44 56 2040 81 81 64 86 57 64 46 72 54 55 74 66 53 69 80 74 71 80 65 62 59 65 52 65 60 41 58 22 32 58 48 55 44 43 68 49 47 43 57 55 59 6) 87 58 93 47 72 24 46 58 50 50 69 28 71 84 81 82 79 68 52 69 60 47 78 76 41 57 6 43 46 68 65 45 63 43 57 47 31 63 32 58 0150 65 78 53 88 50 57 32 56 52 51 01 00 45 65 81 73 71 79 66 51 54 59 52 68 72 48 62 25 36 54 55 60 52 54 66 48 54 45 55 45 58 58 67 26 83 20 55 44 72 46 45 62 53 41 58 70 68 48 70 58 60 45 65 37 69 60 23 56 21 27 52 53 45 48 29 78 44 48 40 35 43 50 70 72 45 85 50 40 28 64 39 47 49 48 23 45 64 16 51 59 47 46 43 59 42 70 52 47 58 21 26 50 51 50 47 24 63 36 32 27 36 45 48 2270 48 48 14 15 31 39 16 50 48 27 37 35 26 31 66 66 47 70 51 39 16 50 36 47 51 20 48 16 24 22 36 39 35 27 54 37 21 25 18 22 37 2980 94 61 32 83 54 45 34 56 43 43 63 54 61 70 85 80 65 81 58 34 61 69 32 61 50 32 38 10 23 55 43 50 50 41 74 56 52 49 50 40 54 DIST 66 63 29 82 35 46 32 63 44 41 54 48 35 50 70 70 52 69 53 48 41 61 37 63 54 30 52 18 25 47 47 46 47 29 68 42 39 35 34 39 48 78 73 40 89 36 51 40 55 53 60 65 56 41 60 72 76 70 77 68 57 37 70 41 71 71 36 59 21 28 52 50 55 45 35 70 47 49 40 43 39 54 0158 74 72 29 83 36 49 28 63 49 48 45 45 23 45 64 63 50 70 53 49 38 62 23 67 62 31 50 19 25 44 40 54 46 30 66 44 36 30 32 30 47 DISC 51 60 24 82 32 38 20 53 42 49 56 44 22 49 63 65 63 66 54 50 29 57 35 71 65 38 58 15 23 43 45 56 49 37 69 39 33 31 31 32 46 DISD 05 78 53 86 53 57 32 60 52 51 61 60 45 65 81 73 71 79 66 51 54 57 52 68 72 48 52 25 36 54 55 60 52 54 66 48 54 45 55 45 58 0151 66 63 29 82 35 46 32 63 44 41 54 48 35 50 70 70 52 69 53 48 41 01 37 63 54 30 52 18 25 47 47 46 47 29 66 42 39 35 34 39 48 STOT 65 68 33 84 37 47 29 58 47 50 56 50 31 53 69 69 62 71 58 51 37 61 37 68 65 36 56 19 27 47 47 54 48 36 68 43 41 35 38 36 50



HIGH SCHOOL SCIENCE



EARTH SCIENCE

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Astronomy (12 items), Geology (17 items), Meteorology (7 items), and Oceanography (4 items).

The population includes all high school students (with the exception of the exam schools) who took an Earth Science course and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed very poorly on this test with a system-wide everage score of 49%. Generally, students are performing moderately well in the domain of Astronomy, although they did not do well on isolated objectives. Items tapping knowledge of the solar system (item #'s 5 and 7) and earth in space (item #'s 10 and 12) were not mastered.

Performance in the domains of Geology, Meteorology, and Oceanography was poor across most items. In Geology of seventeen items there were thirteen that more than fifty percent of the students answered incorrectly. In Meterology four of the seven items and in Oceanography all four items were answered incorrectly by more than fifty percent of the students.



-195-

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL EARTH SCIENCE

1985 - 198€

I.A.8	Describe the monthly changes in the appearance of the moon	-	
I.C.1	Members of the universe by their characteristics; stars	2	
I.A.9	Describe the observed daily motion of the sun	۵ ا	
I.C.10	Knowing novas suddenly become much brighter and then fade	4	
I.D.4	Knowing the most massive object is the sun & planet: Jupiter	5	
I.D.6	Contrast the small & large planets with respect to character	6	
I.D.8	Astronomical objects/meaning of rotation and revolution	7	į
I.E.	Applying Newton's Law of Gravitation qualitatively	8	
I.F.4	Relate the seasons to the earth's axis & plane of revolution	9	1
I.F.7	Eclipse of the moon	0 -	
I.G.2	Understand the scape velocity from a heavenly body		
I.F.9	Knowing the moon makes a revolution in 1 month around earth	1 2	
II.H.3	Difference among atoms of diff. elements by atomic structure	1	
II.H.S	Diff. between compounds & mixture by atomic-molecular theory	4	
II.H.8	Identify physical properties & relate to atomic-mole theory	5 1	Ì
II.H.12	Knowing the chemical symbols of ten elements	6	
II.H.15	Measure volume & mass of substance & compute density(d=/v)	7	
II.I.1	Identify the origins of the 3 major types of rock	∞	1
II.I.4	Identify specimens of sedimentary rocks by their characters	9	Į
II.I.7	Describe the characteristics of some metamorphic rocks	0	- 1
II.J.5	Explain concepts "young river" & "mature river"	2	
II.J.2	Describe the effects of frost, humidity on weathering	2	
II.J.8	Define the terms aquifer and water table	3	- }
II.J.16	Describe typical features of a glacier-eroded landscape	2	
II.K.2	Knowing the interior layers of the earth	5	
II.K.3	Knowledge of compressional and shear waves	2	
II.L.1	Define the major terms associated with mountair building	2	i
II.M. 7	Distinguishing among the divisions of geologic time scale	8	
II.M.9	Identify the life forms prevalent in 4 geolog c eras	2	į
III.N.1	Knowing that meteorology is the study of weather	03	
III.N.2	Identify the layers of the atmosphere	- ω	l
III.N.4	Knowing the gases that make up the atmosphere	23	1
III.N.9	Define radiation, conduction, convection and absorption	W W	l
III.O.4	Interpreting the symbols on a weather map	بي م	ł
III.P.11	Define cold front, warm front, stationary front	5 3	l
III.P.15	Know that rain-producing clouds have the letters nimb	3	İ
IV.R.2	Name the components of the hydrosphere	3	- 1
IV.T.9	Explain the causes of neap tides; spring tides	8 3	
IV.V.6	Name sources of atmospheric pollution in metro Boston	9	l
IV.W.12	Identify renewable and nonrenewable sources of energy	4 C	
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550 LAPTH SCI TECKNOOS 11/07/86
PERCENTAGE OF CORRECT ANSWERS PER 115M
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PHYSICAL SCIENCE

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Measurement (1 item), Motion (1 item), Forces (3 items), Work/Energy (3 items), Energy/Waves (5 items), Energy/Matter/Heat (8 items), Chemical Change (6 items), Electricity/Water (3 items), Electricity/Magnetism (3 items), Electricity/Light (2 items), Special Relativity (1 item), and Nucleus (4 items).

The population includes all high school students (with the exception of the exam schools) who took a Physical Science course and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed very poorly on this test with a system-wide average score of 42%. There are a total of twenty-eight items on the test which fewer than fifty percent of the students answered correctly and all domains have significant numbers of items that are not being mastered.



DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL PHYSICAL SCIENCE

1985 - 1986

C.3,4	English and SI imits of measure convert English as CI		
D.16	English and S1 units of measure, convert English to S1 unit Determine acceleration of falling dense objects	i I	
E.7	Distinguish between weight and mass	2	
E.17	Centripetal force used to keep objects in orbit is gravity	3	
E.24	State Newton's third law of motion	4	
F.1	Define work as W = F x d	5	
F.4		6	
F.11	Work, potential energy & kinectic energy can be transformed	7	
G. 2	Power is work per unit & horsepwr & watt are units of power	8	
G.4	Produce & describe waves in strings, slinkies & water	9	
G.5	The period, frequency, velocity & amplitude of a wave	0	
G.28	Relate the velocity of a wave to frequency & wavelength		
G.24	Describe the path of light thru lenses of varying shapes	21	
H.4	Recognize that color is related to frequency	3 H	
H.3	Law of conservation of energy	44	ļ
H.7	Define heat as a form of energy that changes temperature	5	
I .	Define the unit of heat as the calorie	6-1	- 1
H.15	Materials can exist as solids, liquids & gases & change	7 1	- 1
H.11	Define density as Mass/Volume & way to ident substances	∞	
H.25,26	Understanding atmospheric pressure	9	
H.19	operation of a hot air balloon	0 2	
H.32	ings of a refrigerator	12	
1.3	ferent elements have different physical properties	2	
I.13	equal volumes of different gases equal nos. of particles	42	- 1
I.25	writing and balancing chemical equations	94	
I.33	Major components of the atmosphere	52	
I.43	Know that H ₂ CO ₃ is a component of tonics	6 2	İ
1.50	When acids & bases are mixed, they neutralize to water:salt	72	l
J.3	Matter is Composed of + & - charges	∞ ~ l	
J.24	Relate the atomic no. to the no. of positive charges; nucleus	ادی	
J.29	Distinguish between ionic & covalent bonds: use atom model	0 3	l
K.1	Passage of electricity through a conductor	1ω	
K.13	Recognize that a moving charge produces a magnetic field	23	- 1
K.7	Distinguish between simple series & parallel circuits	WW	
L.4	Light is produced by electrons change energy levels in atoms	1 w 4	
M.1	Speed of light in a vacuum is a constant	σω	1
L.11	Describe the complete electro-magnetic spectrum	6 W	-
N.1	Nucleus of an atom of atomic number 10 & mass 20 AMU	7 3	
N.2	Isotopes of an element are atoms w/same no. of protons	8 3	
N.13 7	Define fission	93	
N.13 3	,	0 4	
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555 PHYS SCI TECRSOOS 11/07/86
PERCINTAGE OF CORRECT ANSWERS PER TIEM
NOTE TOO PERCENT ON A PARTICULAR TIEM IS INDICATED BY **

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BIOLOGY

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring the circled objectives in the curriculum strands of Biology/Study of Living Things (11 items), Continuity of Lire (5 items), Microbiology (3 items), Animal Kingdom (16 items), and Plant Kingdom (5 items).

Ine population includes all high school students (with the exception of the exam schools) who took a Biology course and for whom valid answer sheets were turned in.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 55%. Generally, students performed fairly well on the items in the Animal Kingdom domain, although they had difficulty with one item on invertebrates (item # 28) and two items on vertebrates (item #'s 33 and 34).

In the remainder of the domains out of twenty-four items there were twelve which fewer than fifty percent of the students answered correctly. In Biology/Study of Living Things the difficulty was with characteristics of living things (item #'s 4, 6, 8, 10, and 11). In the Continuity of Life domain students had difficulty with the items that tapped the inheritance of traits (item #'s 12 and 13). In Microbiology the two items identified had to do with monera (item #'s 17 and 18). Within the Plant Kingdom domain students had difficulty with the items that tapped the structure and function of a seed plant and plant reproduction (item #'s 36, 37, and 40).



DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

BIOLOGY

1985 - 1986

1				
	I.A.1	Describing the scientific method	L	
i	I.A.5	Identify parts & functions of a light microscope	٢	1
i	I.B.4	importance of chemical element carbon: define organic compute		1
1	I.B.7_	dasic principles of the cell theory	4	
	I.B.8	Major structural cell components seen thru light microscope	<u>دم</u>	
١	I.B.83		6	
	I.B.10 I.B.10	Similarities & differences between animal & plant cells	7	
I	I.B.13	Function of amino acids in generality	∞	
	I.B.19	Function of amino acids in construction of proteins	(3	
į	I.B.37	Major structural differences between RNA and DNA Stages of mitosis and missis in their	0 -	
ı	II.A.4	Stages of mitosis and meiosis in their correct sequence		1 1
1	II.A.8	Mendelian inheritance scheme; trace a single trait What is meant by "sex-linked traits"	2	
	II.D.1	Contributions Kari on Lines make a large	3 –	
ı	II.D.3	Contributions Kari son Linne made to classification organisms Define 'binomialmenclature'		
1	II.D.4	Enumerate main levels classification from species to kingdom Describe some of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the important of the importan	1	
ı	III.A.1	Describe some of the important characteristics of monera		1 1
l	III.A.4	Distinguish three general shapes of bacteria	1	l <u>.</u> l
١	III.B.1	Describe the structure of a typical protozoan cell	8	
	IV.A.1	Radial structural symmetry	ن ب] [
l	IV.A.6	Understand what is meant by "regeneration" in important	0] [
	IV.A.15)		2	1
l	IV.A.15	o an allocations parts of all cardinolin	2	1
l	IV.A.18	Industrial importance of mollusk aquaculture; food	ω <i>γ</i>	
l	IV.A.20	Pamiliar with animale belonging to the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination of the termination	2 2	
	IV.A.26	Disease carriers and her income	6	
ł	IV.A.24	Major characteristics of the class Insecta	5 7	
	IV.A.27	Necribe E identify the main and control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the cont	82	
	IV.A.28	INDICALL OF COMMISTS and the second laborates to the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates and the second laborates a	9	
ŀ	IV.A.30	Kello tamilian with the element well.	0 3	
	IV.B.1	Characteristics of vertebrates & typical vertebrate body plan)	
	IV.B.6		3 3	
	IV.B.7	External & internal structure of larval & mature amphibians	2 2	
	IV.B.10	\mathcal{W}	2 2	
	IV.B.20	INCCINCE the chamaghanianian control to	5 3	
	V.B.2	Cumpare characteristics of	6 3	
	V.B.5	Describe the function & structure of xylem & phloem	7 3	
	V.C.6	Major differences between photosynthesis & respiration	» «	
	V.C.12	Describe different types of tropism	၁ ယ	
	V.D.1	Parte of a flavoring inter-	4 0	
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510 BIGLUGY TECR5005 11/07/36
PERCENTAGE OF CORRECT ANSWERS PER LITEM
NOTE 100 PERCENT UN A PARTICULAR LITEM IS INDICATED BY **

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MARINE SCIENCE

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring the circled objectives in the curriculum strands of General Characteristics of the Marine Environment (6 items), Composition of the Seas (4 items), Properties/Motion of the Seas (16 items), Interactions (3 items), and Life in the Sea (11 items).

The population includes all high school students (with the exception of the exam schools) who took a Marine Science course and for whom valid answer sheets were submitted. It should be noted that this course is only offered at a few high schools and the data included is only for Districts A and C.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed very poorly on this test with a system-wide average score of 40%. There are a total of twenty-nine items which fewer than fifty percent of the students answered correctly and all domains have significant numbers of items that are not being mastered.



DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL MARINE SCIENCE

I.1	Dimensions of earth, moon and sun are very different		
1.3	Distances between earth & moon & between earth & sun	2	
I.11	Oceans cover about 4/5 of the earth's surface	3	
1.20	Principal difference between seawater & fresh water	2	
I.22	Volumes of seawater, ice & fresh water on the globe	5	
I.27	Familiar with a few nautical terms	6	1
II.1	Oceans contain varied assortment of nonliving & living substance	17	
II.3	Seawater is a solution containing many different solutes	∞	Į
II.4	Chemical elements that are found dissolved in seawater	ပ	İ
II.16	Living organisms when they die are decomposed by chain of organ.	0 -	}
III.A.	Properties of the ocean are determined by properties of water	<u> </u>	ł
III.A.	८ Chemical ६ physical properties of water	2	1
III.A.	Bit traited faster d sould hole slowly Hi All than in later	и н]
III.A.	bepending on turbidity of water, light reaches diff. depths	4-	1
III.A.		5 1	}
III.A.1	Branch residence d MCIVIII COMPS d 4 (NIO) 16	6 –	1
III.A.3		7	ł
III.A.3	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	∞ ⊢	
III.A.3		9	
III.B.2		0	
III.B.S		2	
III.B.1		2	
III.B.1		32	
III.B.2		2 2	
III.B.2	Tefforte the Cult Comment of 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 2	
IV.A.8	Fossils & other remains of marine organisms are found in rock	2 2 5 7	
JV.B.3	Seas play an important part in the hydrologic cycle	2 2	
IV.B.5	1/6 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	? 2	
V.A.1	Class of Chemical compounds, the proteins, unique of live organ	0 3	
V.A.7	Believed by many that lif originated in the seas	3	
V.A.10	Seawater contains a supl., of compounds that are nutrients	3 2	
V.B.1	Plants need sunlight to sustain their growth & development	W W	
V.B.6	Greater environmental stability of oceans: more animals live in	43	
V.B.8	Gravity of most organisms on land is many times their environ.	5	
V.C.3	Marine plants provide lge, part of world's atomspheric oxygen	3	
V.C.10	Marine animals are the consumers in the sea	3	
V.C.11	Energy requirements of marine animals	83	· [
V.C.15	Faster-moving bilaterally symmetrical animals mouths in head	93	,
V.C.17	Mechanism of jet propulsion that animals use to propel themselve	40	
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555 MARINE SCI TESKSOUS 11/07/86
PERCENTAGE OF CORRECT ANSWERS PER TIEM
NOTE 100 PERCENT ON A PARTICULAR TIEM IS INDICATED BY **

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CHEMISTRY

INSTRUMENT AND POPULATION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Overview (3 items), Atomic Theory (8 items), Periodic Table (5 items), Atomic Structure/Nucleus (2 items), Atomic Structure/Electrons (7 items), Gases (4 items), Phases/Phase Transitions (1 item), Solutions (1 item), Stoichiometry (1 item), Kinetics (1 item), Acids/Bases/Ionic Solutions (3 items), and Electrochemistry (4 items).

The population includes all high school students (with the exception of the exam schools) who took a Chemistry course and

for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 56%. Generally, students performed fairly well on the domains of Atomic Theory, and Solutions, and most of the items in Overview, Periodic Table, Atomic Structure/Nucleus, Atomic Structure/Electrons, Gases, Phases/Phase Transistions, Stoichiometry, and Kinetics.

Of the seven items in the remaining two domains, there were five items that fewer than fifty percent of the students answered correctly. In Acids/Bases/Tonic Solutions students had difficulty defining pH (item # 33) and knowing that solution of pH less than 7 are acid and greater than 7 are basic (item # 38). In Electrochemistry students had difficulty calculating oxidation numbers, writing equations for reactions at anode and cathode with electrical current, and defining oxidation, reduction, oxidizing agent, and reducing agent (item #'s 35, 36, and 37).



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DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL CHEMISTRY

1985 - 1986

1	 .			
	I.4	Law of conservation of mass		
ı	I.8	Calculate Kelvin temperature from Celsius and vice-versa	2	
	I.15	Define Chemical change	3	
ı	II .8	Recognize chemical formulas	4	ĺ
1	II.9)	Define atomic mass, molecular mass, gram atomic mass, gram	5	ĺ
ł	II.9 {	molecular mass and mole	6	!
1	II.9) II.10)	Intermed charles 1 1 1 2 2 6	7	
Į	II.10	Interpret chemical symbols and formulas	∞	
ı	II.110)	Dotomino amministal Carralas Carra	9	
l	II.11 II.12	Determine empirical formulas from info. about percent composition	0 -	ı
١	III.10	Writing balanced chemical equations		
ı	III.4	Determine combining power of elements from location periodic tab.	1	
l	III.8	Define atomic no., periods, families, groups & transition elems. Locate metals, nonmetals & metalloids in the periodic table	3	
ì	III.3	Understand basis for acceptance of Mendeleev's periodic table	4	
1	IV.5	Describe current model of the nucleus	5	
ı	IV.6	Define isotope	1	
١	V.6	List order of filling available in orbitals of elements frm H/Rb	j 7	
l	V.9	Define filled shell and valence electrors	8	
l	II1.7	Describe the general characteristics of each family	9	
l	V.20	Define covalent bond	0	
l	V.8	Associate energy of orbitals with location of elements/period.tab	2	
ĺ	V.5	NUMBER Of ALACTrone that may accusal and as all all all		
	V.18	Recognize common polyatomic ions	3 2	
ĺ	V.27	Define molar covalent hand	2 2	
l	XI.1	State Royle's law	5 6	
١	XI.11	Value of Avogardro's number	5 7	
١	XI.5	Define standard temperature and pressure of a gas	82	
İ		Know the molar volume at STP	9	
	XII.1	Describe the assumptions of the kinetic theory	0 3	
l	XIII.3	Compute concentrations in solution	1 3	
l	XVII.2	Define conjugate acid-base pairs, amphoteric substance, etc.	23	
I	XVII.0	perine ph	, , , ,	
	XVIII.7	Define anion, cation, anode, cathode, electrolysis, electroplatno	اسم	
l	XVIII.4	Calculate oxidation numbers	5 W	
	XVIII.8	Write equations for reactions at anode & cathode w/elec. current	တယ	
١	XVIII.5	Define oxidation, reduction, oxidizing agent & reducing agent	7 :N	
	XVII.9	solutions of pH less than 7 are acid, greater than 7 are basic. \mathbb{I}	∞∞∣	
	XIV.4	Solve mixed volume, mole & weight problems	ာယ	
	VA.11	Explain function of a catalyst on rate of a chemical reaction	40	
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515 CHEMISTRY TECRSODS 11/07/80
PERCENTAGE OF CORRECT ANSWERS PER 13EM
NOTE 100 PERCENT ON A PARTICULAR 13EM IS INDICATED BY **

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PHYSICS

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Physics Preliminaries (9 items). Mechanics (19 items), Electromagnetism (6 items), Properties of Matter/Kinetic Theory/Thermodynamics/Waves (3 items), and Light/Optics (3 items).

The population includes all high school students (with the exception of the exam schools) who took a Physics course and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 52%. Generally, students appear to be mastering the objectives in the domain entitled Properties of Matter/Kinetic Theory/Thermodynamics/Waves and most of the items in the Physics Preliminaries domain. In this latter domain students had difficulty with items involving basic concepts of trigonometry of right angles and modern standards of length and time (item #'s 25 and 27).

In the remaining domains there were a significant number of items that more than fifty percent of the students answered incorrectly. In Mechanics students had difficulty with items that the motion in more than one direction (item #'s 12, 32, and hotion in one direction (item #'s 17 and 26), vectors (item #16), force (item #23), work/energy/power/conservation (item #40), and momentum/conservation (item #39). In the Electromagnetism domain students performed poorly on the items involving electrically/electrostatics (item #'s 3 and 18), electrical currents/resistors/capacitors (item #'s 3 and 24), and simple circuits (item #13). In the Light/Optics domain performance was poor on the items tapping the nature of light and illumination (item #'s 5, 10, and 15).



DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL PHYSICS

	I.B.5	Other basic units of measurement & concept of derived units		T-
	II.A.4	belimition of average acceleration and its use	Γ	
	III.B.10 IV.C.2	Simple parallel plate capacitor	1	
	V.A.1	How temperature is measured and how it differs from heat	3 4 5	
	I.A.4	The five properties associated with light	5	1
	II.D.8	Acquiring familiarity with scientific notation	6	
	III.B.3	Nature of friction: direction, magnitude, static, kinetic & coeff.	7	
	IV. C. 1	Resistance & resistors; Ohm's Law V = R I & units of resistance	∞	
	V.A.2	Concept of heat & temperature are related but distinct quantity	တ	
	I.A.5	Properties that light possesses that can be associated w/waves Understand arithmetic manipulations with the second arithmetic manipulations.	0 -	
	II.C.5	Understand arithmetic manipulations with scientific notation Motion in vertical direction is independent of	⊢` ⊢	
-	III.E.5	Motion in vertical direction is independent of horizontal dir. 2 types of connections, series & parallel, which	2	!
	IV.C.3	2 types of connections, series & parallel, which occur elec circ Three systems of measuring temp.: Farenheit, Celsius & Kelvin		
ļ	V.A.3	Fact that color is simply the frequency of visible light	4-	
-	II.B.2	outility of representing position & velocity by westone	1 5 6	
	II.A.10	orderstand the physics of tree fall	1 5 7	
1	III.A.2,5	Electrons & Coulomb's law	7 8	
1	I.B.8	Metric system as a decimal system	9	
ĺ	II.B.4	Fundamentals of adding vectors; resultant of 2 or more vectors	2	
	III.B.7 I.B.9	Relation exists between power & resistance p = 1/p	2	
1	II.D.10	Contrast weight, (earth vs. moon) & mass independent of location	2	ĺĺ
1	III.B.4	officers at law of gravitation, and Newton's constant		
1	I.A.10	Physical model of electron transport in conductors; resistivity	2	
1	II.A.12	Basic concepts of trigonometry of right triangles Area under curve by plotting speed up time is	5 2	
1	I.B.3	Area under curve by plotting speed vs. time is distance traveled Modern standards of length and time		
1	II.B.1	Concept of a vector as distinguished from a large	7	
	I.A.9	DASIC TESHITS from geometra:	æ 72	
	3.8.II	Graphical & analytical resolution of vectors	2 3	
-	I.B.7	Systems of units & conversion factors	3	-
	II.C.11	Define simple harmonic motion, its amplitude & period	23	Ì
	11.4.1	Concepts of displacement and average speed	N N	
	11.3.0	Calculate final velocity from initial velocity accelerat time	2 3	1
ı	11.0.0	riojectile is liked at angle: velocity must be harize a year l	л w	ĺ
	11.0.10	Movietge of the kinematics of uniform circular motion	ا بد ح	
		Newton's second law; unit of force	7 34	
		Scientific definition of power	∞∽	
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SOCIAL STUDIES



DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL SOCIAL STUDIES - LEVEL 3

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DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL SOCIAL STUDIES - LEVEL 4

C.3	Describe various aspects of what is called culture	
C.4)	Identify the origins of the present population of the United	2
C.4 {	States and the immigration routes used by various groups, with	3
C.4)	special emphasis on where current residents of Boston came from	4
C.5	Identify key events in US history, emphasis on events in N.E.	5
C.6	Give description of contributions of major persons in US history	6
C.45	Identify important governmental land ks; why they are important	5 7
C.6)	Give description of contributions of some major personalities in	8
C.6}	U.S. history	9
€.7	Identify on map of US, major population centers & natural resource	
C.8)	Locate on globe or world map: Boston, the U.S., Canada, Mexico,	
ر c.8	No. Am., the other 6 continents, 4 major oceans	21
C.9	Place the major features of the US on a blank map	3 -
ር.10ን	Describe the basic functions of the 3 branches of the federal govt	127
C. 103	executive (President), legislature (law-makers), & judiciary(ct)	
C.13	Describe the election process for the Presidency	6 -
C.15	Locate Mass./N.E. on a map of US and on a world map or globe	7.1
C.16	Compare different kinds of maps of MA/NE & draw some conclusions	81
C.17	Identify major natural resources in MA/N.E.	91
C.18	Identify major features of MA/N.E. on a map of the area	0 2
C.23	Significance of major events in MA/N.E. and US history	2 2
C.24	Sequence of major events in MA/N.E. history (timeline)	122
C.6	Give description of contributions of major persons in US history	32
C.51	Location of 5 N.E. states and place them on a blank map	
C.25	Major contributions of MA/N.E. history to history of the US	42
C.6	Give description of contributions of major persons in US history	5 2
C.28	Nat. Am. were original settlers, others came from diff. areas	2 6 7
c.33)	Give examples of prejudice & discrimination based on race, sex,	
ં c. ૩૩}	ethnicity, religion, national origin, physical disability	2 2 8 9
C.38	Describe major features of economies of MA/N.E. and compare	
C.41	Describe basic functions of 3 branches of government in ea. state	Οω
C.51	Location of 5 N.E. states and place on a blank map	- ω
C.52	Location of capitals of N.E. states & major cities of MA on map	$\sim \omega$
C.56)	Location of the equator, North & South Poles, the No/So hemisphere	ωω
C.56)	and the East/West hemispheres and place them on a blank map	
C.59	Become familiar w/maps of Boston, MA, & N.E.	5 ω
	Describe the election process for the Presidency	6ω
	Significane of major events in MA/N.E. and US history	7 3
	Recognize who is allowed to vote in local, state & nat'l elections	∞ ω
C.43	Identify some major elected & appointed officials of Bos., MA/NE	
	The same was created a appointed officials of bos., FA/RE	40
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DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL SOCIAL STUDIES - LEVEL 6

c.36)	Locate the Equator, Tropic of Cancer, Tropic of Capricorn, Arctic	1
c.36)	Circle, Antarctic Circle. North and South Poles, latitude and lorgitude lines, No/So/E/W hemispheres on a blank map	2
C.4	Describe way in which humans obtained food prior to agriculture	ω
C.9	Identify modern counties located on sites of ancient civilizations	4
C.3	How archeologists pieced together story of early human evolution	5
C.8) C.8	Acquire basic knowledge of location and narrative history of ancient civilizations, including role of outstanding individuals and groups	6 7
C.14,15,	Summarize importance of major events; describe major features of	8
c.14	Middle Ages; distinguish between different economic systems Summarize importance of major events, i.e., discovery of fire	9
C.13	Give major contributions of at least 10 historical figures	01
C.14,15	Summarize importance of major events, describe major features of Middle Ages	
C.15	Describe major features of Middle Ages in diff. parts of E. hemis.	21
C-16	Describe major features of the Renaissance in Europe	31
C.14	Summarize importance of major events, i.e., invention of writing	4 1
C.8	Acquire basic knowledge of location & narrative hist. of anc. civ.	5 1
C.13	Give major contributions of at least 10 historical figures	6
C.14,18	Summarize major events; Identify holidays, customs of E. hem. cult.	7
C.8	Basic knowledge of location & narrative history of anc. civiliz.	8 1
C.14,15	Summarize major events; major features of Middle Ages	9
C.27	Distinguish between different economic systems	02
C.13	Give major contributions of at least 10 historical figures	1-2
C.39)	Locate other major physical features of the Eastern Hemisphere	22
c.39)	for example: Sahara Desert, Himalaya Mountains, Alps	ω ~
C.40	Locate major countries of the Eastern Hemisphere	دم هـ.
C.37	Place the 7 continents and 4 major oceans on a blank map	σ r ₂
C.42\	Identify some major natural resources of regions	\$ 12
C.42)	each continent	7
C.42		æ ~
c.42)		9 2
C.36,37	Locate the Equator, Tropic of Cancer, etc.; Place 7 continents and 4 major oceans on a blank map	ιο ω
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C.36,37	Locate the Equator, Tropic of Cancer, etc.; Place 7 continents and 4 major oceans on a blank map	3 3
C.36 C.36	Locate the Equator, Tropic of Cancer, Tropic of Capricorn, Arctic Circle, Antartic Circle, North & South Poles, latitude and longitude lines, N/S/W/E Hemispheres on a blank map	ω :s
C.36)		4- ω
C.8,14)	Acquire basic knowledge of location & narrative history of ancient civilizations; Summarize importance of major events	5 7 ω
C.8,14)		ნ ა
C.13	Give major contributions of at least 10 historical figures	73
C.14	Summarize importance of major events, i.e., Code of Hammurabi	ထ ယ
C.13)	Give major contributions of at least 10 historical figures	မ ယ
C.13)		40
C.8)	Acquire basic knowledge of location & narrative history of ancient civilizations, include role of outstanding individuals	4 4 1 2
C.19	Identify instances of prejudice & discrimination in ancient world	4 ω
C.30	Development of systems of money from simple barter to exchange	44
C.8	Basic knowledge of location & narrative history of anc. civiliz.	4 2
C.8,14	Knowledge of location & narrative hist. of ancient civiliz.,	6 4
C.8184	Summarize importance of major events, Identify some customs, holidays, festivals, etc. of Eastern Hemisphere cultures,	4
C.8,14,		4 8
c. 37	Place the seven continents & four major oceans on a blank map	4 0
C.39	Locate other major physical features of the Eastern Hemisphere	0 5
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DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL SOCIAL STUDIES - LEVEL 7

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	C.2,14	Basic knowledge of Pre-Columbian civiliz. in West Hemisphere	-
	C.1-3.14.22	Significance of major events & persons in Latin Am. & Canada hist. See #1 for C 2.14: Pre-Colum, soc. level tech.; patterns of migration of humans into & thru W. hemis.; major natural resourc.	2
	C.5,6	Nogative cultural attitudes of European explorers & settlers	ω
	C.4,11,14	toward Pre-Columnian people a destruction of their civilizations Describe major voyages of discovery a exploration by Europeans;	4
	C.4,11,14 {	Knowledge of major events in Latin Am. hist. in post-Columbian era; Signify major events a persons in Latin Am. a Canada hist.	5
ŀ	C.4,11,14)	cra, organity magor evenes a personal in mason and	6
	C.4,9,11,14	See Questions # 4-6 for C.4,11,14; Knowledge of major events in	7
	C.9	Canadian hist., difference between French & non-French speaking Knowledge of major events in Canadian history	æ
			9
	C.8.11.17	See Ques. #4-6 for C.11,14 & #3 for C.6; Examples of resistance to Europeans by Pre-Colum. people; effect of Europeans on cult. See Ques. #9 for C.8,11; Identify major racial, ethnic, & relig. groups of Canada & Latin America, emphasize pluralism	0-
	C.11,17)	Knowledge of major events in Latin Am. hist. in post-Columb. era, major racial, ethnic, & relig. groups of Canada & Latin America	
	C.11,17	major racial, ethnic, & relig. groups of Canada & Latin America	2-
	C.8,11,17	See Ques. #10 for C.8,11,17; Describe ways in which diff. groups	ω
	20 C.17	in W. Hemisphere have influenced ea. other thru war, trade, etc. Identify major racial, ethnic, & relig. groups of Can. & Lat. Am.	
	C.17,20	See Ques. # 14 for C.17, See Ques. # 13 for C.20	5
	C.17,19	See Ques. # 14 for C.17, Prejudice & discrimination against	6
	C.16	groups in Canada & Latin America Influences of Latin Am. culture on US based on trade, migration	7-
	C.9,17)	See Ques. # 14 for C.17, Knowledge of major events in Can. hist.	∞ - -
	C.9.17	Differentiate between French-speaking & non-French speaking Canadians	∞ ⊢
	C.18,20	Customs, holidays & festivals of Can. & Lat. Am., Ways different	0 2
	C.11,14)	groups in W. Hemisp. have influenced ea. other thru war, trade Acquire basic knowledge of major events in Latin Am. history in	~ ~
	C.11,14	post-Columbian era; Significance of selection of major events a persons in Latin Am. and Canadian history	22
	C.11,13,14	See Questions # 21&22 for C.11,14; Sequence of major events and	ω∾
	C.11,142	able to make a timeline See Questions # 21 _ 22 for C.11,14	4 2
	C.11,14)	•	5 2
	C.9,10	Knowledge of major events in Can. hist., Est. of Commonwealth of	6 2
	C.11,13	Nations & the new Commonwealth nations Knowledge of major events in Lat. Am. hist., Sequence of major	72
	C.9	events & able to make a timeline Knowledge of major events in Canadian history	∞ ~
	C.9,14	See Question #28 for C.9; Significance of major events & persons	92
	C.9	in Latin Am. and Canadian history See Question # 28 for C.9	οω
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	C.9,14	Knowledge of major events & persons in Lat. Am & Canada history	⊷ ω
	C.9	Knowledge of major events in Can. hist. diff. between Canadians	~ ω
	C.16	Influences of Latin Am. culture on US based on trade, migration	ယ ယ
l	C.28	Describe way in which competition drives prices down and scarcity	ω 4
	C.28,29	increases prices of items for which is there is demand See question # 34 for C.28, Define inflation, & give examples of countries in W. Hemisphere that have experienced it in recent yrs. See Question #35 for C.29	ဟ ယ
	C.29	See Question #35 for C.29	ნ თ
	C.29)	See Question #35 for C.29	7 3
	C.12,30	Establishment of Am. colonial possessions, Econs. of W. Hemisphere	ထ ယ
	C.24	Identify diff. stages of economic development in Western Hemisphere	ယ ယ
ĺ	C.34	Explore effect of political systems in the Western Hemisphere on	40
l	C.34)	each other (e.g., Cuba's "exporting" of socialism)	
	C.14,18	Significance of major events & persons and identify customs, holidays, & festivals of Latin Am. and Canada	4 ~
	C.34	See Question #40 and 41 for C.34	4 ω
	C.35	Compare practices of diff. govts. in West. Hemisp. on civil rights	4 4
	C.32	Identify reasons for migration of thousands of people from Latin	4.73
	C.32)	America to the US every year	6
	C.36	Place major geographic features on a blank map of West, hemisphere, that has political boundaries & locate major rivers & mountains	4
	C.36,37	See Question #47 for C.36, Place some major countries & cities on a blank map of West. Hemisphere w/political boundaries See Question #48 for C.37	æ æ
	C.37	See Question #48 for C.37	40
	C.11,14	Knowledge of major events & persons in Lat. Am. and Can. history	05
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DEPARTMENT OF EDUCATIONAL TESTING SOCIAL STUDIES - LEVEL 8

CURRICULUM REFERENCED FINAL

		 	
C.1	Acquire basic knowledge of events in US history	C.1,4,27,32	1
C.2	Sequence of major events in US history & able	C.1,4,27,32	2
	to make a timeline of historical events	C.1,4,27,32 C.1,4,27,32	3 4
C.3	Trace origins of different racial/ethnic groups	C.1,9,14,28	1 5
	in the US back in time & geography to their	C.1,8,12,28	6
1	origins in other continents	C.1,7	7
, 3.4	Describe way in which Native American and	C.1,7	∞
]	African cultures have been treated by European	C.1,2,7 C.1,2,7	9
[culture in the US	C.1,7,13	1 1
C.5	Describe some contributions of the cultures of	C.1,7	1 2
""	Native Americans, Africans & other groups to	C.1,5,7,14	ωμ
1	the European culture of the US	C.1,7,12	4
C.7	Give a brief description of a number of important	C.1	5 🗕
""	historical events & figures	0.1910	6
100	<u> </u>	C.1,3,5,7	1 7
C.8	Describe ways in which different groups have recorded & preserved their culture	C.1,7,12 C.1,3,5,7	1 1 8 9
	·	C.1,7	9 0
C.9		C.1,4,7,12,13	12
ļ	groups of the US, with emphasis on multi-ethnic and multi-racial make-up of our country	C.1,7,19	22
	•	C.1,7	ω ~
C.10	Identify some shared values & beliefs of	C.1,7,18	4
	different cultures in the US	C.1,7,13 C.1,7,28	5
C.11	Identify some customs, holidays, and festivals	C.1,7,11	2 2 6 7
	associated with different groups in the US	C.1,7,9,10,18	82
C.12	Describe the way in which Native American,	C.1,7,9,12,13	92
	African, Hispanic, and other "minority"	C.1,7,10	0ω
,	cultures have been treated by Europeans in the	C.1,7,8,10,14	μω
	US, citing instances of prejudice,	C.1,7,21 C.1,7,18	23
	discrimination and oppression	C.1,7	ωω 4-ω
C.13	Identify some instances of prejudice and	C.1,7,21	53
	discrimination against other groups in the US	C,1,7,8,9,10,14	6
C.14	Describe the ways in which oppressed groups have	C.1,7	3 7
	not only survived (coping mechanisms) but	C.1,7	ω ω
	influenced US culture	C.1,7,8,10,14 C.1,7	ဖာယ
C.18	Identify major economic resources of the US	C.1,3,7,9,14	0.4
	Describe the role of labor unions in economic	C.1,7	1 4
0.13	nistory & structure of the US	C.1,3,7,13	34
C 21	<u> </u>	C.1,3,7,13	44
6.21	Identify technological advances that have affected aconomic development of the US and	C.1,7,9,10,12	4.0
	highlight the inventors who were responsible	C.1,7,8,10,13	64.0
0 07		C.1,7,18,21 C.1,7,18,21	7 6
U.2/	Describe the main political values behind the US political system	C.1,7,21	4 4 8 9
	,	C.1,7,21	0 5
C.28	Explore case studies that exemplify value conflicts in US history		
C.32	Use different maps to identify climatic features & natural resources of different regions in US or the world		
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DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL U.S. HISTORY

A.9	Describe native Americans in No. America prior to "discovery"	T-
A.5	Tuentry the curupean countries that engaged in evaluation	-
A.12	TUENCITY MUCIVACIONS FOR EMPONEAUS TO AVOIDING for now lands	12
A.20	Describe fill variety of early multi-cultural & multi-chain assess	ω
A.44	Tachelly existence of Sidvery in the Colonies & what part it missed	12
B.4	Tuchtily accemply of England to control coloniae through towards	5
B.1	beline concepts for example: Salutatory mediect boycott bome and	6
B.13	peacific ideas expressed in the Neclaration of independence	7 1
B.23	identity people or groups: Abigail Adams Thomas Joffonson Lawis & ca	8
B.28	Describe the responsibilities of back besuch of the most person of the	
C.19,27	Define the Nest as changing concent. Identify Toyac Dougla a second	0 1
C.20	- record of the most important Native American tribes in the United States	
C.20	an illa file 1000 7	1 1 2 3
D.46	Indicate graphically the change in the U.S. from a rural nation to urban	125
C.24	TOUGHTOU ONE OF EXPENDING THE PAR MACT. IN AT SEA NAME OF	4 5
D.44,61	Define concepts for example: industrialization unbanished accepts	61
B.13	ACCOLUDE INCAS EVALENCED IN THE HELISTATION OF INVONCED	5 7
C.32,51	Tuchelly What is meant by "Hacksonian Democracy" Idon+: fy	1 1 8
D.17	Doing Concepts for example: Frontier, Pural Haban Donulist Diagram	91
C.51	- tacheria reladua di ultubas: Abraham Lancoln, lilvecoc e come a per e e	0 2
C.50	Define concepts for EXAMPLE: STATE'S FIGHTS COCCECION FIRM TARRED.	12
C.50 C.71	modified till till till till till till till til	22
	TOCHELL CITE PLOATS TOUS OF THE 131H TAIH IN 1810 Amondmonts	32
C.67	Define concepts for example: Reconstruction suffrage amondments	42
D.6 D.12	Theretily riessey vs. rerouson as Astablishing "consents but access"	52
C.71	- dentity reasons for tounding of Niagra movement. NAACD & Haban Lagaria	62
D.2	Tueller of Florisions of the 131H. [41H. and Third Emondments	72
D.69	ruencity people of groups: Booker I Washington NAACD WED Duber	82
D.03	compare diganizing, racial a dender compositor of unions	92
D.45	Define concepts for example: Reconstruction Pacien Civil Diales	0ω
D.45	Tuencing people of groups: Andrew Carnedia John D. Dockseilles (1994)	μω
D 44	nigers invited high Edison, henry ford Alayandan Chaham Dali	20
D.45	being concepts for example: Industrialization linkanization tende	ယယ
D.44	Turning propire of aroubs: urville and wilhow Unight flitch upcome	4 ω
D.44	Define concepts for example: Competition, Social Darwinism, unionism,	ဟ ယ
E.1	"" POITUID, SUCIDIISM, KODDER KARON, CORNORATE CANITALISM	0 W
E.2	Define concepts for example: nationalism, militarism, jingoism	ν ω
E.14	Identify people or groups: Theodore Roosevelt, Karl Marx, Bolsheviks	ထ ယ
E.2	ocseribe differed accellents to remain helitral during way	မ ယ
E.2	Identify people or groups: Woodrow Wilson, Leon Trotsky, Hearst newspapers, Pancho Villa	40
B.22	Define concents for example, constitution	
F.1	Define concepts for example: constitutional govt., balance of power	4.0
F.40	Define concepts for example: Cold War, United Nations, isolationism Identify people or groups: Gorald Fond large Nations, isolationism	ယမ
D.61	Identify people or groups: Gerald Ford, Jesse Jackson, Kevin White	4 4
D.54	Identify people or groups: Samuel Gompers, Amer. Federation of Labor Interpret the Black migration to the North	5 4
E.37	Identify the strategies used to win passage of the torus	40
F.40	Identify the strategies used to win passage of the 19TH Amendment Identify people or groups: Jimmy Carter, support least a model.	74
E.46	Identify people or groups: Jimmy Carter, current local & nat'l reps. Identify groups in America that did not share in the 20's prosperity	8 24
F.40	Identify people or groups: Nguyen Van Thieu, Shirley Chisholm, mayor	4 0
	o response signification in the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the	0 04



F.40 Identify people or groups: Caesar Chavez, Andrew Young, cit	ty council .	- 5
E.29.65 Identify the Sacco & Vansetti case; recognize contradiction	ns in racism	20
C.51 Identify people or groups: 54th & 55th Mass. Regiment, Iris	sh Regiment	ယ ဟ
F.36 Identify the Civil Rights movement as leading groups to see	ek rights	2 5
E.19 Recognize the Treaty of Versailles changed the map of Europ	oe k	თ თ
D.88,E.45,50 Define concepts: consumer, annexation For E.45,50 see ()ues. #60 ⟨	0 0
A.1 Define concepts for example: economic change, global market	t, culture	75
D.45 Identify people or groups: Henry Ford, Elijah McCoy, Granvi	ille T Woods 🖟	ထ ဟ
E.1 Define concepts for example: missionary, neutrality, imperi	ialism	95
D.88,E.45,50 Identify new technology effects; describe effects of the	he Depression d	06
E.48 Identify people or groups: Herbert Hoover, Bernard Baruch,		- 6
E.48 Yellow Peril, movie stars, Paul Robeson, Huey P. Long, Ra	alph Bunche r	~ ∞
E.58 Define concepts for example: Fascism, Third Reich, Gestapo	, Allies 🏻 🖟	ယ တ
E.61 Narrate w/refs. to maps, events leading up to WWII, identify	fy leaders .	4
E.58,59 Identify concepts & people or groups: Holocaust, unnamed so	oldiers	5 6
E.61 Narrate w/refs. to maps, events leading up to WWII, identify	fy leaders	00
E.62 Describe selected events of World War II	-	~10
E.62 Describe selected events of World War II	(ω σ
E.77 Determine reasons why Allied Powers divided Germany		9 6
F.1 Define concepts for example: Cold War, middle class, GI Bi	ll, sit-ins [0
F.40 Identify people or groups: school committee, Libertarian Pa	arty .	7
F.39 Define concepts for example: historical distance, facts/op	inions, draft,	2
E.72 Determine why the dropping of the A-Bomb in Japan is still	debated	37
E.58 Define concerts for example: disarmament, occupation force	s, War Bonds .	7
E.66 Analyze reasons why Jap-Am were placed in concentration can	mps .	5
E.58 Define concepts for example: Underground Resistance, German	n-Am Fund,	6
E.58 America First, C-Rations, Fifth Column, Lendlease, the b	litz -	7
E.77 Determine reasons why the Allied Powers divided Germany		7
E.2 Identify people or groups: Lenin, Leon Trotsky, Pancho Vil	la -	7
F.24 Identify Kennedy policies in international affairs	1	0 &



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DEPARTMENT OF LDUCATIONAL TESTING CIVICS

CURRICULUM REFERENCED FINAL

1985 - 1986

				-
	A. 5 A. 24	Why people create governments to prevent anarchy Explain why a Constitutional Convention was in Phil. in 1787	1 2	
	A.33 A.36 A.14	Define concepts for example; popular sovereignty, federalism Explain the constitutional principle of separation of powers	4	
Î	B.5	Describe procedures for becoming a naturalized citizen of US Powers of Congress in relation to revenue, taxes, commerce	5 6	
j	B.1	Define concepts for example; bicameral, Senate, impeach	7	
1	B.17	Constitutional powers and duties of the President and V.P.	∞	ŀ
1	C.2b	How federal and state govts are related within a fed system	ပ	
١	B.29	Explain the meaning and uses of judicial review	0	
١	B.34a C.2	How money is raised to pay the cost of the federal govt.		1
1	C.13	How federal and state govts are related with a fed system	2	
1	C. 30	Explain the various roles of the state governors	3 1	1
1	C.36	Organization and operation of county govt in Mass. Describe metropolitan government agencies		1
İ	C. 34	The power and duties of Boston city officials	5 1	1
	C. 33	Organization & operation of govt according to Bos. City Char.	6 1	
	D.1	Define concepts for example; interest groups, coalition	L	
-	D.20	Describe rules for voter eligibility	1 1	ĺ
ļ	F.11	How basic economic decisions are made in a command economy	2 0	
1	D.33	Identify various techniques of propaganda used in campaigns	2 2	
l	D. 35	Skill of writing letters to influence opinions & decisions	2	1
1	E.15	Criminal justice procedures, from arrest to sentence or acq.	22	ļ
1	E.12	Identify and describe major types of crimes	4 2	
	E.26	Code of Discipline; rights & responsibilities	5 2	
	E.28	Various procedures established by the Code of Discipline	5]
١	F.9 F.17	Define concepts for example; capitalism, communism	7 2	1
l	F.11	Advantages & disadvantages of the 3 types of business organ.	æ 72	1
	F.1	How basic economic decisions are made in a command economy Define concepts for example; depression, inflation, GNP	9	1
١	F.8)	Identify major problems that may afflict an economic system	0 3	1
١	F.8	arrive an economic system	3 3	ì
1	I.22	Majority rule w/minority rights is a character of dem. soc.	W W	
l	I.15	identity organizations, individuals & events ex., NAACP	10° 42	İ
l	I.16	Brown vs Board of Educ. & Heart of Atlanta Motel vs U.S.	5 3	
1	I.17	Passage of federal laws during the 1960's and 1970's	6 3	
۱	I.10,I.		7	
l	J.4 J.2	The role of the Secretary of State in forming foreign policy	∞ અ	
1	J.2 J.19	President's roles of chief diplomat and commander in chief	3	
	0.15	Organization and operation of the United Nations	0	
	J.11	Major changes in development of American foriegn policy;1945	14	
	B.7	Special powers of the House of keps and the Senate	4	1
	C.41 A.18	Identify main sources of revenue of state & local govts	3 4	
	F.1	Items in terms of the period before the Constitutional Conv.	4-4-	
	B.15		2 4	
			6 .	
		How judicial review became principle of American govt; 1803 American Revolution, Continental Congress, Declaration of Ind	4 6	
		Explain the various roles of the state governors	8 4 9	
!	F.1	Define concepts for example; depression, inflation, GNP	0 5	
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B.11	Define concepts for example: chief executive, electoral college	- 5
B.26	Identify & describe the main roles of federal judicial officials	25
B.11	Define concepts for example: cabinet, nominate, electoral vote, treaty	ယ ဟ
A.32	Explain connection between proposal & ratification of Bill of Rights and ratification of the Constitution	5
B.1	Define concepts for example: bicameral, Senate, House of Reps.	5 55
B.26)	Identify & describe the main roles of federal judicial officials	5
B. 26		75
B.14	List qualifications & terms of office of the President & Vice Pres.	ω 5
E.11	Define concepts for example: trial, grand jury, plea bargaining	10 m
A.12	Define concepts for example: citizen, alien, immigrant, naturalization	06
A.40	Describe importance of "elastic clause" in preserving the Constitution as a living document	-6
C.6)	Identify powers and duties of major state agencies	00
c.6		m el
B.34	Summarize how the federal govt. gets money to finance activities	00
B.1)	Define concepts for example: Congressional district, political party,	56
B.1)	majority & minority party, bill, impeach, lobbyist, quorom, veto	90
B.3		6
B.3/		80
8.3√	Describe how the Congress is organized	20
B.3/		07
A.16,17	Connect rights & responsibilities & describe the responsibilities or	
E.7	duties of citizenship in a democracy, necessary to preserve rights Define concepts for example: civil rights, due process, implied rights	2
A.16.17	Connect rights & responsibilities & describe the responsibilities or	w ~
A.33	duties of Citizenship in a democracy, neccesary to preserve rights Define concepts for example: federalism, popular sovereignty	47
D.28,32	Define concepts for example: public opinion poll, pollster, propaganda Explain how the mass media of communication might influence the public	5 7
F.9)	Define concepts for example: capitalism, communism, socialism,	6 7
F.9	market economy, free enterprise, command economy, competition	77
F.1)	Define concepts for example: business cycle, depression, inflation,	8 7
F.1	recession, recovery, Gross National Product (GNP), consumer goods	9 7
F.15	Define concepts for example: corporation, partnership, monopoly	6 %
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FOREIGN LANGUAGES

BOSTON PUBLIC SCHOOLS DEPARTMENT OF EDUCATIONAL TESTING CURRICULUM REFERENCED FINAL

1985 - 1986

1980 - 1980			
(TRAN\$•IAR	READI NG	FUNCTIONAL OBJECTIVES	CULTURE
1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2	4 4 4 4 4 1 2 3 4 5	abrde	1 - 1
Use correct form of the adj. to agree in no. 6 gender w/noum Use gustar & other similar verbs (encantar) correctly Use contractions al and del correctly Use contractions al and del correctly Use contractions al and del correctly Use contractions al and del correctly Use contractions al and del correctly Use contractions al and del correctly Use idiomatic expressions Using saber and conocr in correct form Using double negatives with negative words such as nadie Use correct forms of personns Use idiomatic expressions with tener and hacr Use idiomatic expressions with tener and hacr Use idiomatic expressions with tener and hacr Use in a preguntar in correct form Use pedir and preguntar in correct form Use infinitive form of the verb correct torm Use in a to describe actions that will occur in the future Use saber and conocer in correct form Use saber and conocer in correct form Use basic time expressions (time, days, months, date, seasons) Use saber and estar in correct form Use idiomatic expressions with tener and hacer Use idiomatic expressions with tener and hacer Use idiomatic expressions with tener and hacer Use idiomatic expressions with tener and hacer Use to correct form of the adj. to agree in no. 6 gender w/noun Use the correct form of the adj. to agree in no. 6 gender w/noun Use the correct form of pronouns after a mreposition Use correct form of free verbs correctly in present tense Use idiomatic expressions with tener and hacer Use correct form of free verbs correctly in ore 6 gender w/noun Use the correct form of free verbs correctly in ore 6 gender w/noun Use the correct form of free verbs correctly in ore 6 gender w/noun Use the correct form of free verbs correctly in ore 6 gender w/noun Use the correct form of free verbs correctly in present tense Use idiomatic expressions with tener and hacer Use correct form of free verbs correctly in present tense Use idiomatic expressions with tener and hacer Use correct form of free verbs correct form of the adj. to agree in or 6 gender w/noun Use the correct	Reading with sufficient comprehension to interpret set expressions in areas of immediate need Reading with sufficient understanding to interpret highly contextualized words or cognates within predictable areas	Expressing want, desire or intention Instructing or directing others to do something Expressing gratitude Expressing regret Expressing likes, dislikes, or preferences	Oultural Knowledge
		8.5.8.8 9.5.8.5.1	>40

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BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL SPANISH II

1985 - 1986

		-	
C.1	Reading with sufficient comprehension to understand in printed form the simplest connected material dealing w/basic survival or social needs	2 - 5	
E.16	Use irregular affirmative informal commands correctly	6	
E.15	Use regular affirmative informal commands correctly	7	
E.17	Use negative informal commands and affirmative and negative formal commands correctly	8	
E.11	Use conjugated forms of reg. verbs in the present perfect tense	9	
I.5	Use the past participle as an adjective correctly	0-	
E.24	Use the infinitive form of the verb after prepositions		Í
J.4	Use pero in positive statements & sino in negative statements	2	
K.2	Form negative constructions two ways (nadie me habla; no me habla nadie)	3 1	
L.2	Use interrogative words correctly		<u>~</u>
Level I G.9	Use the correct forms of demonstrative pronouns	51	READING
1.8	Use correct forms of demonstrative adjectives	61	ING
Level I L.2	Use interrogative words correctly	1 1 7 8	
Level I I.7	Use correct patterns w/tancomo to make comparisons of equality		
Level I L.2	Use interrogative words correctly	02	
Level I E.9	Use conjugated forms of reg. verbs in the conditional tense	12	
E.5	Use conjugated forms of reg. & irr. verbs in the imperfect tense	22	
E.21	Use subjunctive mood to express doubt, denial and unreality	32	
E.7	Use conjugated forms of reg. verbs in the future tense	42	
E.3	Use conjugated forms of spell/change verbs in the present tense	52	
G.10)	Use the relative pronouns que and quien correctly	62	
G. 10		2	
E.23	Use the passive voice correctly	82	
1.5	Use the past participle as an adjective correctly	92	
н.4	Omit articles w/unmodified nouns of nationality & occupation	03	
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M.1	Recognize uninverted questions by intonation	μS	PAR
G.3 Level I	Use the correct forms of pronouns after a preposition	~ω	GRAHNAR PART A
Level I	Use correct patterns w/tancomo to make comparijons of equality	ယယ	78
M.8 Level I G.10	Use other idiomatic expressions (acabar de, por lo menos)	ω4	
G.10	Use the relative pronouns que and quien correctly	ဟ ယ	
	-261-		<u> </u>



-261-

E.3	Use conjugated forms of regular, irregular and stem-changing verbs correctly in the preterite tense	36 - 45	GRAMMAR PART C
£.8}	Use conjugated forms of irregular verbs correctly in the future tense (decir, hacer, poder, querer, saber, poner, salir, tener, vernir)	46 - 55	VERBS
P.10 P.5 R.4 R.10 R.13	Report and answer requests for factual information Report information chronologically related Inquire about interest or disinterest Inquire about satisfaction, dissatisfaction, or disappointment Express want, desire, or intention	5 5 5 5 6 6 7 8 9 0	FUNCTIONAL OBJECTIVES
V,W	Culcural Knowledge and Cultural Attitudes	1 - 10	CULTURE



379 SPANISH II TLCK5005 11/37/86 PERCENTAGE UF CURRECT ANSWERS PER LIEM NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY ** 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 TUTAL SCHL 41 52 35 29 47 17 76 52 11 58 52 23 70 70 70 58 47 47 58 70 23 58 17 29 35 41 47 47 47 88 76 76 76 52 70 50 41 70 83 51 58 67 80 83 80 90 87 64 93 96 83 67 54 80 80 20 67 58 64 90 87 45 51 87 77 87 90 96 74 54 87 75 41 64 66 43 54 50 79 72 50 79 75 50 85 87 79 71 52 68 72 77 52 58 47 68 68 43 50 72 60 87 85 89 75 54 81 66 1250 83 77 77 12 81 40 64 62 06 68 61 66 66 55 40 74 42 66 74 57 57 74 40 62 24 55 25 55 72 83 77 87 79 75 79 64 1100 40 43 25 34 28 15 46 28 40 71 34 21 31 21 71 37 28 21 34 21 40 34 40 28 40 34 34 46 40 62 28 43 43 31 31 36 67 65 58 58 61 31 58 50 56 69 51 50 53 43 52 60 37 50 59 44 51 59 40 50 30 47 23 52 60 75 59 70 66 59 61 54 DISB 42 64 71 28 57 35 64 57 14 57 21 14 42 28 50 35 42 64 35 14 28 21 7 28 42 42 14 42 42 85 71 64 57 21 50 40 75 63 58 44 66 47 66 38 52 77 47 50 61 47 63 55 36 50 61 50 27 50 47 33 63 52 41 58 66 75 61 61 8 33 41 53 1120 23 41 29 29 11 88 70 35 29 23 35 17 29 35 64 52 35 35 35 47 11 23 35 35 47 11 17 64 64 88 88 82 88 47 23 42 DISC 55 58 43 37 50 55 67 41 38 59 38 34 47 40 61 50 37 49 49 41 23 37 35 32 55 40 29 56 61 80 70 67 65 34 38 48 39 40 35 25 46 60 71 60 14 53 32 17 64 46 60 50 25 53 53 35 17 25 10 14 25 42 32 57 46 92 67 78 60 78 71 46 83 83 50 66 66 66 66 66 83 66 ** ** 83 83 50 83 66 ** 50 50 50 66 0 83 83 83 83 83 83 83 66 83 70 1070 0150 47 52 38 32 50 61 70 58 26 55 41 26 70 55 64 55 29 58 55 47 23 29 17 23 20 50 32 61 52 91 70 79 64 76 73 50 1383 43 46 27 37 62 45 51 40 29 56 51 27 56 45 54 56 45 56 51 48 32 45 27 40 29 29 29 54 67 75 54 75 64 62 70 48 1210 87 58 60 38 62 40 74 42 36 06 58 28 66 64 44 60 42 64 56 64 26 24 54 24 52 52 22 48 60 90 76 82 48 74 62 54 33 72 33 22 50 44 83 55 21 12 77 21 38 33 44 94 50 55 61 66 21 33 0 44 16 38 44 66 44 66 77 44 88 66 77 50 1240 60 57 43 35 60 42 67 43 32 63 59 21 58 52 47 64 44 60 55 59 28 33 35 33 38 41 28 53 60 80 68 73 60 68 67 51 DISA 41 64 66 43 54 50 79 72 56 79 75 50 85 81 79 71 52 68 72 71 52 58 41 68 68 43 50 72 66 87 85 89 75 54 81 66 67 65 58 58 61 31 59 50 56 69 51 50 53 43 52 60 37 50 59 44 51 59 40 50 30 47 29 52 60 75 59 70 66 59 61 54 DISB DISC 55 58 43 37 50 55 57 41 30 59 38 34 49 40 61 50 37 49 49 41 23 37 35 32 55 40 29 56 61 80 70 67 65 34 38 48 41 57 38 37 50 61 70 58 26 55 41 26 70 55 64 55 29 58 55 47 23 29 17 23 20 50 32 61 52 91 70 79 64 76 73 50 DISD 60 57 43 35 60 42 67 43 32 63 59 27 5 52 47 64 44 60 55 59 28 33 35 33 38 41 28 53 60 80 68 73 60 68 67 51 DISE 57 60 50 42 56 45 67 50 42 65 53 37 ... >2 57 61 40 56 57 53 36 43 36 41 42 44 32 57 60 31 69 74 65 58 62 53 10.12



EOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL FRENCH I

1985 - 1986

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	I.59820 M.88 H.76477811 E.17.601.5562 H.188276477811 E.17.700 M.12.7612.37 M.10.57327612.37	and locutions like a cote de & common prepositions & pts. compass Place object pronouns before an infinitive when conjugated verb is followed by an infinitive when conjugated verb is Use the correct form of partitive (du, de l', des, de la) Use correct forms of possessive adjectives Use conj. forms of reg. verbs correctly in the passe compose tense Use correct comparative forms of adjectives Use correct forms of possessive adjectives Place indirect object pronouns in position before conj. verb Use idiomatic expressions w/avoir & locutions like a cote Use forms of disjunctive pronouns alone, after prepositions Use correct forms of demonstrative adjectives Use adverbs of quantity with de and nouns Use forms of quantity with de and nouns Use correct forms of interrogative adjective quel Use commands correctly Use conjugated forms of reg. verbs in the passe compose tense Use y and en correctly and placing before verb Use & place adverbs correctly in a sentence Use conj. forms of common irregular verbs in passe compose tense Use & place adverbs correctly in a sentence Use conj. forms of common irregular verbs in passe compose tense Use de before plural adjectives that precede the noun In affirmative command, place obj. pronouns after verb w/hyphen Use idiomatic expressions with avoir, faire, jouer a, jouer de, locutions like a cote de & points of the compass Use y and en correctly and placing before verb Place direct obj. pronouns in position before conjugated verbs Use conj. forms of common irr. verbs in the passe compose tense Use the contractions au, aux, du, des correctly Use vocabulary from areas for example: human body, geography Use correct forms of demonstrative adjectives Form negative sentences by placing ne & pas around verb/present U interrogative words correctly Use nejamais in the present, by placing around the verb	$\begin{smallmatrix}1\\6&7&8&9&0\end{smallmatrix}$	GRANIAR.
	C.1 C.2 C.2 C.2 C.2	Reading with sufficient understanding Reading with sufficient comprehension to interpret set expressions in areas of immediate need	12345	READING
	E.2	Using conjugated forms of common irregular verbs correctly in the present tense: etre, avoir, aller, faire, dire, pouvoir	1 - 10	TRREG. VERBS



-265-

FRENCH I

R.3 P.9 P.7 Q.5 S.1b	Express interest or lack of interest Report and answer requests for factual information Request objects or information Express & inquire about permission to do something Apologizing & granting forgiveness; accepting the apology	abcde	FUNCTIONAL OBJECTIVES
V,W	Cultural Knowledge and Cultural Attitudes	1 - 10	CULTURE



309 FRENCH I TECR5005 11/07/86
PERCENTAGE OF CORRECT ANSWERS PER TIEM
NOTE 100 PERCENT ON A PARTICULAR FIEM IS INDICATED BY **

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 1) 20 21 22 23 24 25 26 21 28 29 30 31 32 33 34 35 36 37 38 39 40 SCHI 1340 54 54 40 32 21 51 18 10 35 40 21 18 54 43 24 29 13 24 27 48 29 27 10 43 45 .1 35 43 24 2 24 21 45 51 48 59 59 18 64 93 1110 72 68 84 60 44 68 28 40 60 44 52 60 56 52 63 48 43 43 12 24 36 20 36 32 8 52 32 24 40 43 24 60 60 80 48 76 28 44 64 DISA 61 59 58 43 30 58 22 25 45 41 33 35 54 46 39 37 27 25 32 58 27 30 17 40 40 16 41 3734, 17 30 22 51 54 61 54 66 22 56 75 1250 56 26 41 39 48 50 29 31 46 41 43 51 51 36 29 65 26 19 51 60 75 36 56 60 36 17 43 29 21 11 26 34 60 48 73 39 68 [4 48 36 1100 50 75 62 54 54 50 16 45 58 45 70 58 70 25 70 66 54 54 41 66 75 62 4 75 50 8 75 58 25 8 12 62 79 66 70 50 79 58 66 54 0158 53 44 49 44 50 53 74 30 50 43 53 53 58 32 44 06 36 32 47 63 75 46 30 60 41 13 55 40 23 15 21 44 67 55 72 43 72 30 55 43 1360 80 40 80 40 40 40 40 40 40 40 40 40 40 40 60 80 80 20 40 23 63 80 23 40 60 40 0 80 0 0 20 0 60 60 60 0 ** 40 ** 20 1120 84 23 23 7 53 61 23 7 7 30 23 23 15 30 23 23 7 15 30 38 15 23 15 7 46 53 53 23 30 30 23 15 53 23 53 61 53 38 53 15 1160 90 62 78 68 65 71 53 68 59 59 68 62 66 59 62 43 78 46 56 62 50 46 46 65 65 37 68 43 43 62 43 43 65 62 75 68 81 40 75 46 DISC 88 50 64 50 62 66 44 52 44 50 56 50 52 52 52 42 54 38 46 56 44 38 38 50 58 38 66 34 36 50 34 38 62 52 68 60 76 40 72 36 1080 54 39 44 45 32 26 21 32 41 45 26 43 63 35 45 54 36 27 35 58 26 43 23 64 20 17 60 20 12 13 28 28 63 35 53 50 63 35 47 36 1210 43 67 33 70 66 37 20 58 58 29 16 41 45 45 25 70 20 12 70 58 41 29 4 41 16 16 87 12 16 8 45 12 70 50 37 41 54 41 45 50 0156 61 45 44 51 41 28 21 39 50 41 23 43 58 38 40 58 32 23 44 58 29 40 18 58 19 17 67 18 13 12 32 24 64 39 49 48 60 37 47 40 DISA 61 59 53 43 30 58 22 25 45 41 33 35 54 46 38 37 27 25 32 58 27 30 17 40 40 16 41 37 24 17 30 22 51 54 61 54 66 22 56 75 0158 53 44 49 44 50 53 24 36 50 43 53 53 58 32 44 66 36 32 47 63 75 46 36 66 41 13 55 40 23 15 21 44 67 55 72 43 72 30 55 43 DISC 88 50 64 50 62 66 44 52 44 50 56 50 52 52 52 42 54 38 46 56 44 38 38 50 58 38 66 34 36 50 34 38 62 52 68 60 76 40 72 36 D1 S0 DISC 61 45 44 51 41 28 21 39 50 41 23 43 58 38 40 58 32 23 44 58 29 40 18 58 19 17 67 18 13 12 32 24 64 39 49 48 60 37 47 40 STOT 64 49 52 41 44 48 26 37 48 43 39 45 56 41 43 52 36 28 42 59 42 39 26 54 36 20 58 30 22 21 29 31 62 48 60 50 67 32 55 48





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309 FRENCH I
                      TECR 5005
                                          11/07/86
PERCENTAGE OF CURRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR SIEM IS INDICATED BY **
SCHL
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 1110
      68 36 20
                8 32 46
 DISA
      64 40 25 8 40 40
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      75 78 78 58 56 45
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 UISB 78 78 66 55 55 48
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      80 60 60 20 20 46
 1120
      23 15 30 15 30 30
1160 93 75 71 43 28 60
DESC
      74 58 60 34 28 51
1080 36 12 30 9 20 37
1210 66 41 50 12 25 41
DISE 44 19 35 10 21 38
DISA 64 40 25 8 40 40
DISB 78 78 66 55 55 48
0150
     74 58 60 34 28 51
0150
DISE 44 19 35 10 21 38
STOT 62 45 44 24 35 43
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